PACKAGE engineering

Rotating tables on the packaging line

Using these tables at various points on a packaging line assures delivery of adequate supplies of containers to machines, and makes unnecessary the frequent line stoppages that impair production. (See Page 23)

Collapsible tube screw thread problems

An engineering approach to factors governing the proper fit relationship of screw threads — with special attention to pitch diameter, thread angle, and proper fit of threaded parts. (See Page 26)

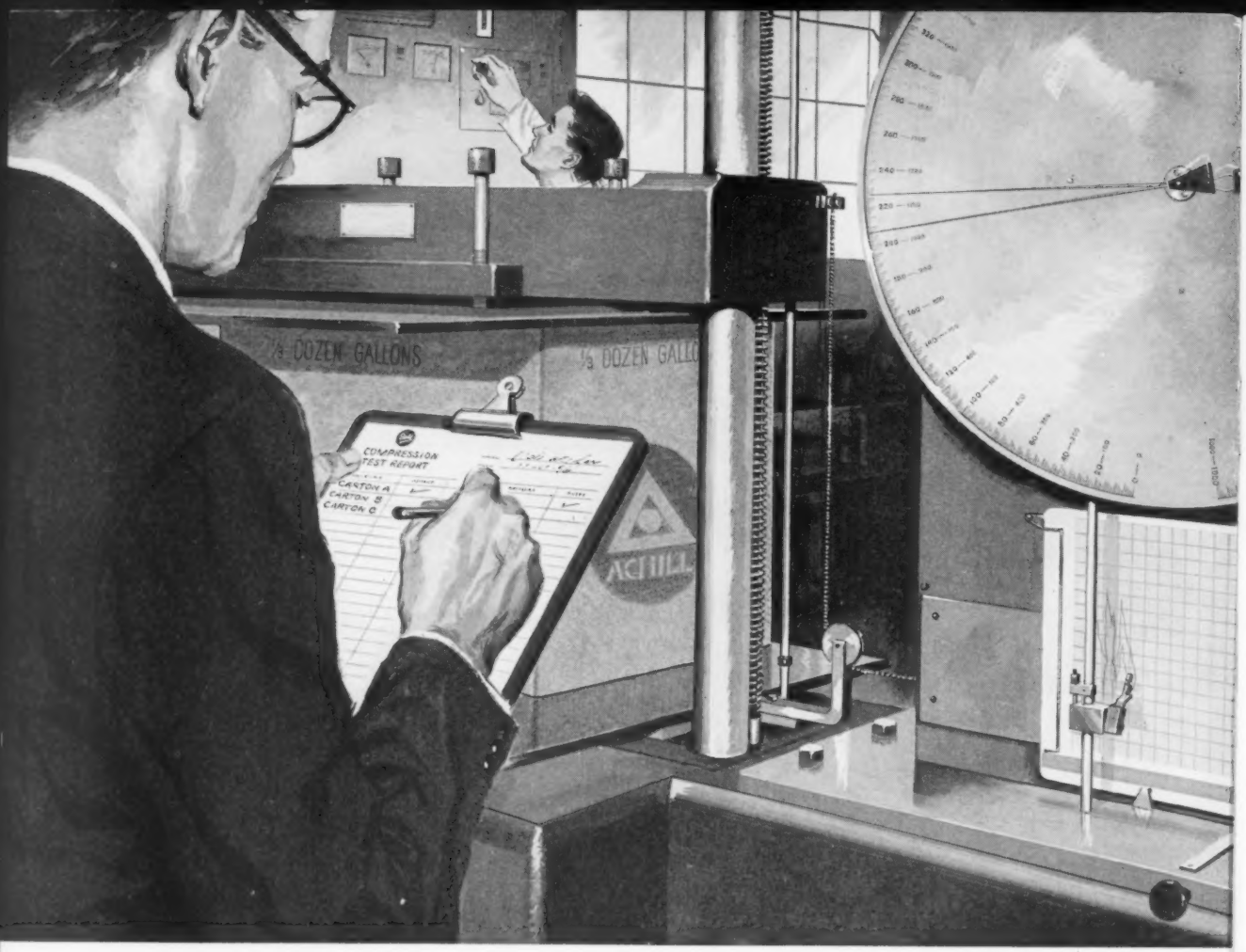
Multiple product and container usage

Having a series of operative packaging lines in one plant permits the rapid shifting of personnel from line to line to make changes in product and package production requirements. (See Page 30)

Complete table of contents on Page 2

SEPTEMBER 1956

VOLUME 1 • NUMBER 9



Ball Brothers' *Personalized* Counsel

can help you cut packaging costs

With operating costs increasing, every dollar saved on packaging is of greater importance than ever. This makes it vital to have shipping cartons for your products which avoid the waste of over-packaging or under-packaging.

Here Ball Brothers' personalized counsel can help you. Ball's practical packaging experts can develop shipping cartons for glass containers which will get your products to market safely . . . with a minimum of expense. For example, using equipment like the compression tester shown above, trained Ball technicians can accurately predict the static load boxes will bear in warehouse stacks or on pallets. This special service has helped many users of Ball quality glass containers and metal closures to cut their costs. It is available to you through your Ball representative.

He can call on Ball's staff of industrial designers, engineers and technicians to aid you in solving your packaging problems . . . container design, processing, filling, shipping cartons, materials handling. These Ball specialists will provide sound practical recommendations that are tailor-made for your operations.

For more information about glass containers, metal closures and "PACKAGING-PLUS" services, write Ball Brothers Company, Dept. PE-96, Muncie, Indiana. Sales offices in all principal cities.

CALL Ball **AND GET MORE THAN GLASS!**

COPYRIGHT 1956, B.B.CO.

Aluminum Foil Packaging as an Insulator

Report No. 5 of a Series by Reynolds Metals Company

Protection of food products from deleterious effects of temperature changes during storage or transit is another example of the versatility of aluminum foil packaging. This benefit is often enjoyed as an extra to foil packaging's many other protective and decorative properties. However, many existing packages were developed primarily to utilize the insulating value of aluminum foil.

The insulating value of aluminum foil, which is used to protect frozen, refrigerated, or perishable products from harmful temperature rises, is derived from its reflectivity of radiant heat. The reciprocal of reflectivity, emissivity, is also utilized advantageously in aluminum foil packaging in applications such as prepared foods where it is desirable that a minimum of radiant heat be emitted from the package.

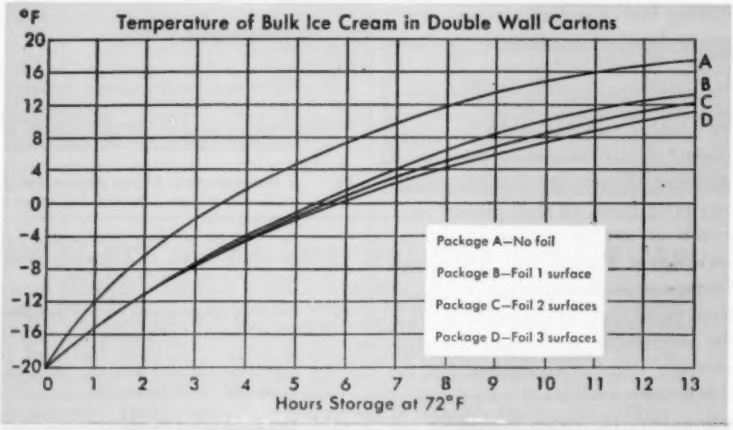
Foil-paper-laminated bags have been widely used for several years as a protection for ice cream cartons. This same protection is readily available to all frozen food products in the form of a foil overwrap, foil-laminated carton, or a foil tray. (Photo compares ice cream bar from a foil package with an identical bar from a less efficiently insulated package.)

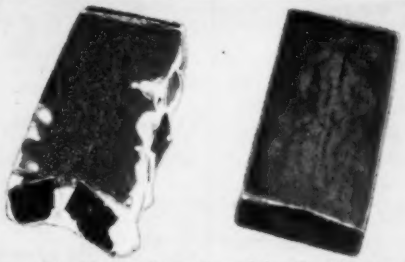
Decoration of the aluminum foil surface affects somewhat the reflectivity and emissivity of aluminum foil, but to a minor degree today, with the availability of very transparent inks and coatings.

The heat reflectivity of aluminum foil has found application in bulk shipments of products susceptible to damage at elevated temperatures. An example is the double-wall corrugated shipping container in which advantage is taken of the foil-faced air space between the inner and outer carton. The accompanying chart illustrates the efficiency of this construction.

Reynolds Research facilities and experience in insulated package development may be made available for your particular problem by contacting your nearest Reynolds regional representative —or by writing to **Reynolds Metals Company,** General Sales Office, Louisville 1, Ky.

© Reynolds Metals Company, General Sales Office, Louisville 1, Kentucky





Condition of Ice Cream Bars Stored for One Hour at 100° F.
Bar at Right Packaged in Foil Wrapped Carton

← Circle No. 201 on Reader Service Card

↑ Circle No. 202 on Reader Service Card

SEPTEMBER 1956 • VOLUME 1 • NUMBER 9

PACKAGE engineering

AN ANGUS J. RAY PUBLICATION

A look ahead

Next month we shall feature a searching discussion of quality control by Paul K. Leatherman, Mallinkrodt Chemical Works, St. Louis. Dr. Leatherman's long experience in this field is the background on which he bases a practical approach to the problems of installing and maintaining a program of quality control.

When Verifine Dairy Products Company, Sheboygan, Wisconsin, installed high-speed wrapping machinery, it also had to solve a number of related problems — such as keeping the wrapper supplied with product. Our next issue will carry an article reviewing Verifine's experience in fitting high-speed machinery into an existing line — including a review of results Verifine is getting.

In contrast to this month's article about Simoniz Company's experience in using a number of alternative packaging lines, we shall present next month an article discussing the experience of Plough, Inc., Memphis, Tennessee, in developing a multi-purpose packaging line. In doing this the engineers at Plough installed alternate items of equipment side by side as they worked out a single packaging line to serve a number of products.

Meanwhile, no one concerned with technical and operational packaging can afford to miss the two important events taking place in Cleveland: The Packaging Machinery and Materials Exposition, September 11-14, and Packaging Institute's 18th Annual Forum, September 10-12.

— R.B.H.

Contents

23 **Multiple use of rotating tables cuts line stoppages, boosts production**
A series of specially-built rotating tables not only assures Vick Chemical Company adequate supplies of glass containers to packaging machinery, but also provides backlogs—with the effect that stoppages along the lines are virtually eliminated.

26 **Intricacies of screw threads for collapsible tubes,** by Mark K. Dresden, president, A. H. Wirz, Inc.
An unusually penetrating study of this subject discloses some points worthy of special attention, such as pitch diameter, thread angle, and proper fit of threaded parts — all supported by calculations and illustrations.

30 **Plantwide coordination key to handling of product and package variations**
To package a multi-product line, Simoniz Company maintains a battery of complete lines — thus permitting shifts of personnel from line to line in order to meet production needs of the different products and containers.

35 **Handy pull-out guide to Packaging Machinery and Materials Exposition and Packaging Institute Forum**
Contains a list of exhibitors, their hotel headquarters, addresses, and telephone numbers of these hotels, and a complete program of Packaging Institute's 18th Annual Forum.

39 **A non-aerating filling device for 50-pound bags of dry powder,** by R. N. Williams, chemist and plant superintendent, Gab!e-Tite Products Company, Inc.
To solve the problem of excessive bulkiness caused by air entrapment during free fall, this company uses a magnetic attachment to hold the sleeve in place for filling.

46 **Keeping high-speed fillers supplied with cans**
Cities Service Oil Company has worked out a means of delivering cans of various sizes to its high-speed filling equipment, and is making improvements that will step up filling speed — to demand even more of its can delivery system.

48 **The Packaging Machinery and Materials Exposition of 1956**
A booth by booth report of machinery and materials which the various exhibitors will have on display at Cleveland's Public Auditorium September 11-14.

58 **Announcements of machinery and products**

62 **Industry literature available free**

67 **Three schools announce package engineering courses**
Columbia University, Illinois Institute of Technology, and New York University announce evening courses in packaging — registration for which takes place during September.

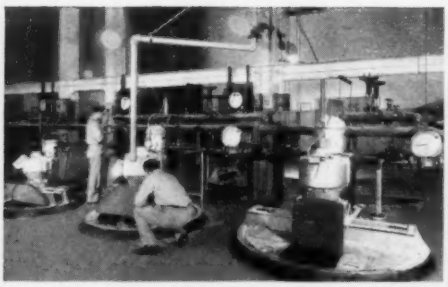
69 **Classified advertising**

70 **What we think** (our editorial page)

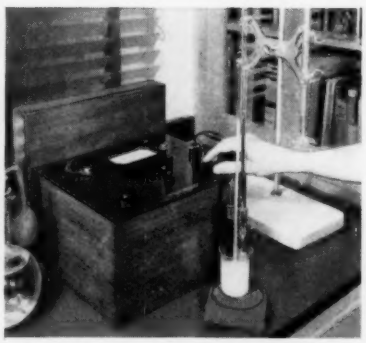
Reader service card inside back cover

Paisley's Scientific Controls Assure Top Quality Adhesives.. *ALWAYS!*

Determining absolute viscosity with water-jacketed viscosity pipet.

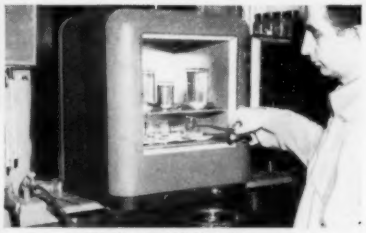


Scientific methods and equipment give absolute control of production in Paisley plants.



Determining the pH of a dextrine with glass electrode potentiometer to control uniformity.

Modern laboratories and skilled Adhesive Engineers serve Paisley customers from coast-to-coast.



Thermostatically controlled drying oven testing high purity of raw materials.

Brabender viscograph gives permanent record of viscosity characteristics of raw materials.

Specimen of every batch is laboratory tested to maintain rigid quality standards.

YOUR HEADQUARTERS FOR GLUES, PASTES, RESIN EMULSIONS, LATEX CEMENTS AND RELATED CHEMICAL PRODUCTS FOR ALL PACKAGING, LABELING AND INDUSTRIAL MANUFACTURING OPERATIONS.

Laboratory coating device for testing coverage of Paisley Adhesives.

HOW TO GET THE ONE BEST ADHESIVE FOR THE JOB!

Paisley Scientific Adhesive Service is nation wide. Plants and warehouses stretch from coast-to-coast. Here, modern Laboratories and skilled engineers develop Adhesives *for every purpose*, to a degree of perfection beyond anything you ever thought possible! All raw materials known to the science of Adhesion are used. ★ Write today for our "ADHESIVE OPERATION DATA SHEET." Return it with information asked for. Paisley experts will study your needs and recommend the ONE best and most economical Adhesive for the operation you describe. Trial shipment on approval if wanted. Here's the SURE . . . the modern way to buy Adhesives.

PLANTS: *NEW YORK • CHICAGO • ST. LOUIS • LOS ANGELES • SAN FRANCISCO*

Paisley® SCIENTIFIC ADHESIVE SERVICE

A MORNINGSTAR, NICOL, INC. SUBSIDIARY

MAIL THE COUPON FOR FREE DATA SHEET

PAISLEY PRODUCTS INC.,
630 W. 51st Street, New York 19, New York
1770 Canalport Avenue Chicago 16, Illinois

Gentlemen:

Send me your Adhesive Operation Data Sheet and catalog of your product line.

Name_____

Company_____

Address_____

City_____ Zone_____ State_____

A note from the Publisher

There are approximately 2500 business magazines published in America today which cover just about every conceivable aspect of American business. Of these business magazines, less than half provide audited circulation. That is, they allow an outside auditing organization to go over their circulation records at six-month intervals and make up a circulation statement to give advertisers and prospective advertisers a true and unbiased picture of the market coverage provided by the readers of the magazine.

We are proud to announce that in the minimum time possible we have joined the ranks of magazines providing audited circulation, having qualified for membership in Business Publications Audit of Circulation, Inc., in June, 1956. You will notice the BPA symbol at the bottom of the right hand column of this page, indicating our circulation is now audited.

The process of providing an initial audit is an interesting one, and I would like to tell quite briefly the process involved.

After our June issue had been mailed, we prepared a count of recipients of PACKAGE ENGINEERING, both by state and by product packaged, and submitted this statement to BPA. A few days later an auditor called on us and started to dig into our records.

To verify mailing counts, he checked our postal receipts, paper usage, and printing bills — to make sure each of our 35,000-plus readers was covered every month, and that we did not have rotating circulation. He then took the galley lists of our circulation and on each page checked one name, which we in turn substantiated with original evidence. To check our state breakdown, a recount was made of selected states and compared with the report we had submitted. The product packaged, or standard industrial classification, breakdown was checked by selecting several classifications, recounting by state and comparing with the records we had furnished. Shortly thereafter we received our audited circulation statements.

PACKAGE ENGINEERING is distributed under a controlled circulation policy; that is, it is sent to selected individuals free because they represent buying power at the package engineering level.

This copy of PACKAGE ENGINEERING is sent to you free because you are concerned with package engineering in one or more of the general areas we cover editorially — package research and development, packaging line production and methods, and package purchasing.

To maintain our audited status, we eventually will need a Reader Verification card from each individual who wishes to remain on our complimentary list.

If the address label on the front of this magazine is "yellow," it indicates we already have received a verification card.

If the label on the magazine is "white," and you wish to remain on our complimentary list, then fill out the Reader Verification Card which is bound into the magazine facing page one. Fill it in and mail it — we pay the postage.

Angus J. Ray
Publisher

AN ANGUS J. RAY PUBLICATION

Angus J. Ray
Publisher

R. Bruce Holmgren
Editor

Laurence V. Burton
Consulting Editor

Irwin F. Megargee
Eastern Manager

Anne Bernhard
Business Manager

Burton Cherry
Art Director

Executive and editorial offices:
1791 West Howard Street,
Chicago 26, Illinois
Telephone: Briargate 4-7837

Eastern advertising sales office:
P. O. Box 270
Ocean City, New Jersey
Telephone: Ocean City 3519

Package Engineering is published monthly by Angus J. Ray Publishing Company, 1791 West Howard Street, Chicago 26, Illinois. Angus J. Ray, president; R. B. Holmgren and I. F. Megargee, vice presidents; James G. Culbertson, secretary and Ethyl K. Ray, treasurer. Please address articles for publication and correspondence regarding the editorial content to the editor. Statements and opinions expressed in articles and editorials are those of the respective authors, for which Package Engineering assumes no responsibility.

Copyright 1956 by Angus J. Ray Publishing Company.

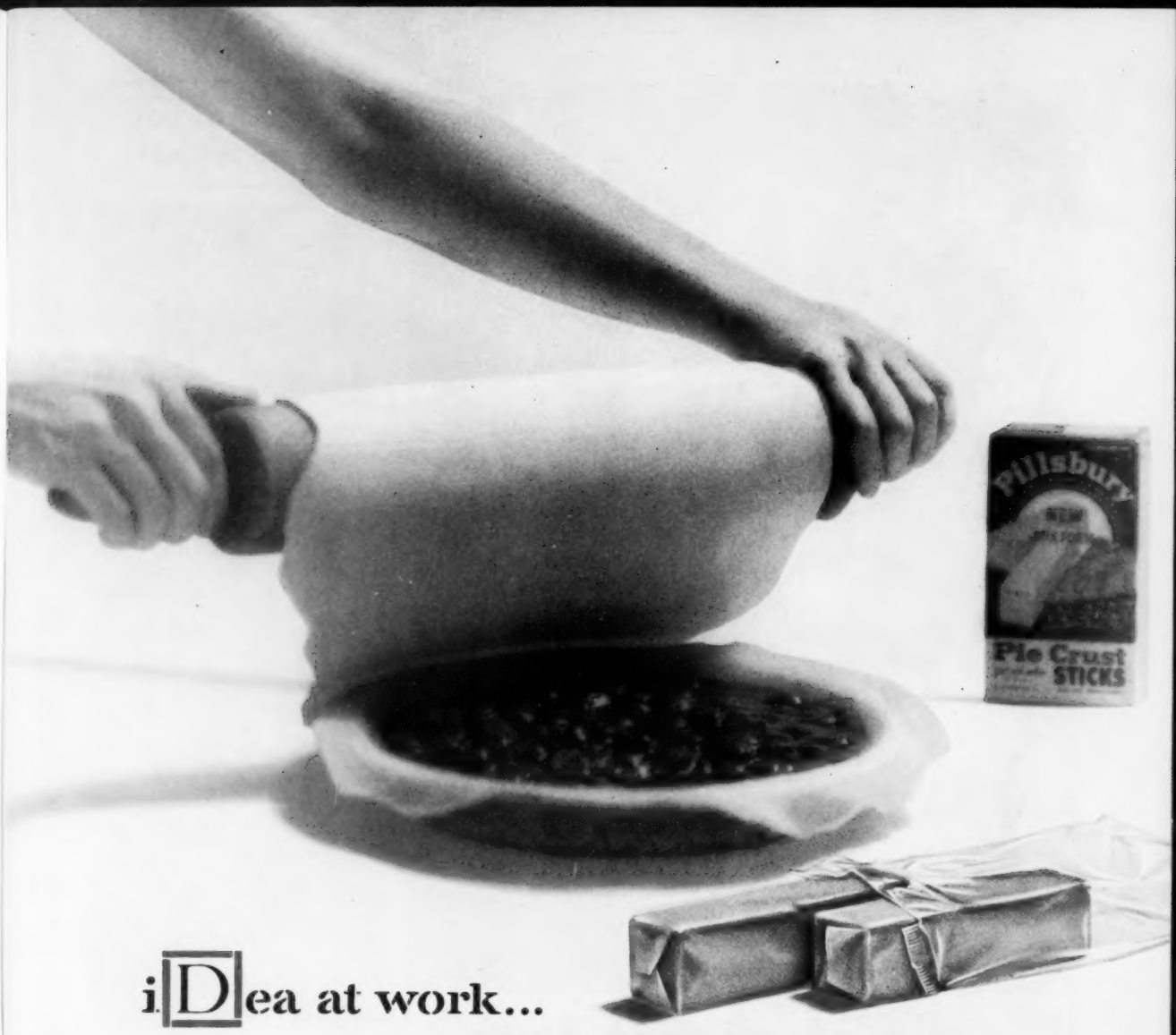
Accepted as controlled circulation publication at Aurora, Illinois.

Package Engineering is circulated without charge to engineering, research, development, production and purchasing personnel concerned with packaging in all companies packaging their products for marketing or shipment. Qualified recipients thus are engineering and technical personnel concerned with package research and development, packaging production and package purchasing, within the United States, to all others, the subscription price is $10.00 a year.

Member of
Business Publication Audit
of Circulations, Inc.

BPA

For more information circle No. 204 on Reader Service Card →

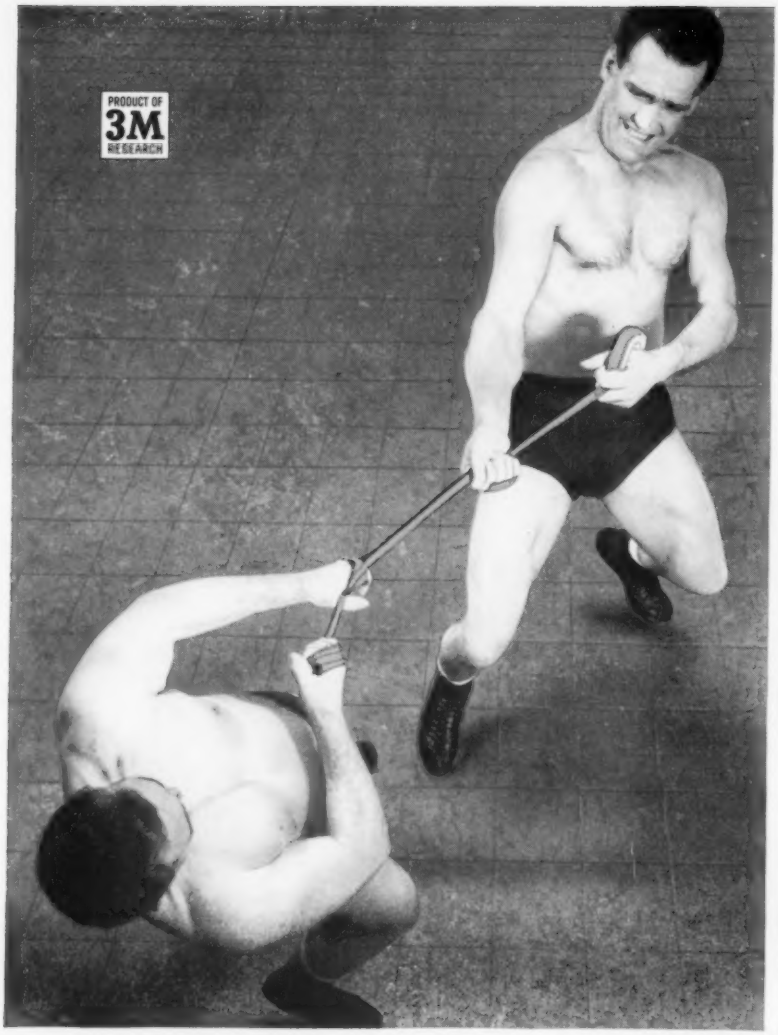


i[D]ea at work...

Dobeckmun Durafilm rolls out faster profits for Pillsbury pie crust sticks. Pan-ready freshness is a prime factor in selling a product like pie crust mix. And so is convenience. Clear, strong Durafilm (polyethylene-coated cellophane) by Dobeckmun provides protection and convenience that builds consumer loyalty for your brand. The superior performance of Durafilm on automatic packaging equipment is another important advantage to explore with your Dobeckmun representative.

Dobeckmun Company, Cleveland 1, Ohio • Berkeley 10, California

Albuquerque • Atlanta • Baltimore • Boston • Charlotte • Chicago • Cincinnati • Dallas • Denver • Detroit • Indianapolis • Kansas City
Los Angeles • Memphis • Milwaukee • New Orleans • New York • Omaha • Philadelphia • Phoenix • Pittsburgh • Portland • Richmond
Rochester • Salt Lake City • San Antonio • Seattle • St. Louis • St. Paul • Syracuse • Tampa • Yakima • Havana • London • Amsterdam



World's strongest tape?

Even 468 lbs. of wrestlers can't break it! "SCOTCH" Brand Filament Tape is amazingly strong, super shock-resistant. Thousands of filaments imbedded in the pressure-sensitive adhesive give it up to 500 lbs. tensile strength per inch of width. Four colors: Red, Blue, Black, White and Transparent. Ask your regular tape distributor how you can use it for heavy-duty packaging, or write us direct. Always specify "SCOTCH" Brand, the *quality* tape . . . and *stick* with it!

FILAMENT TAPE . . . *one of more than 300 pressure-sensitive tapes for industry, trademarked . . .*

REG. U.S. PAT. OFF.
SCOTCH
BRAND

Look what you can do with it!

HARD-TO-HANDLE materials, such as paper sheets in bulk, can be easily packaged using "SCOTCH" Brand Filament Tape. Super-strong tape both seals and reinforces covering.

LARGE cartons and expendable pallets are easily closed and reinforced with "SCOTCH" Filament Tape. Tape won't cut workmen's hands; won't harm contents; is easily disposed of.

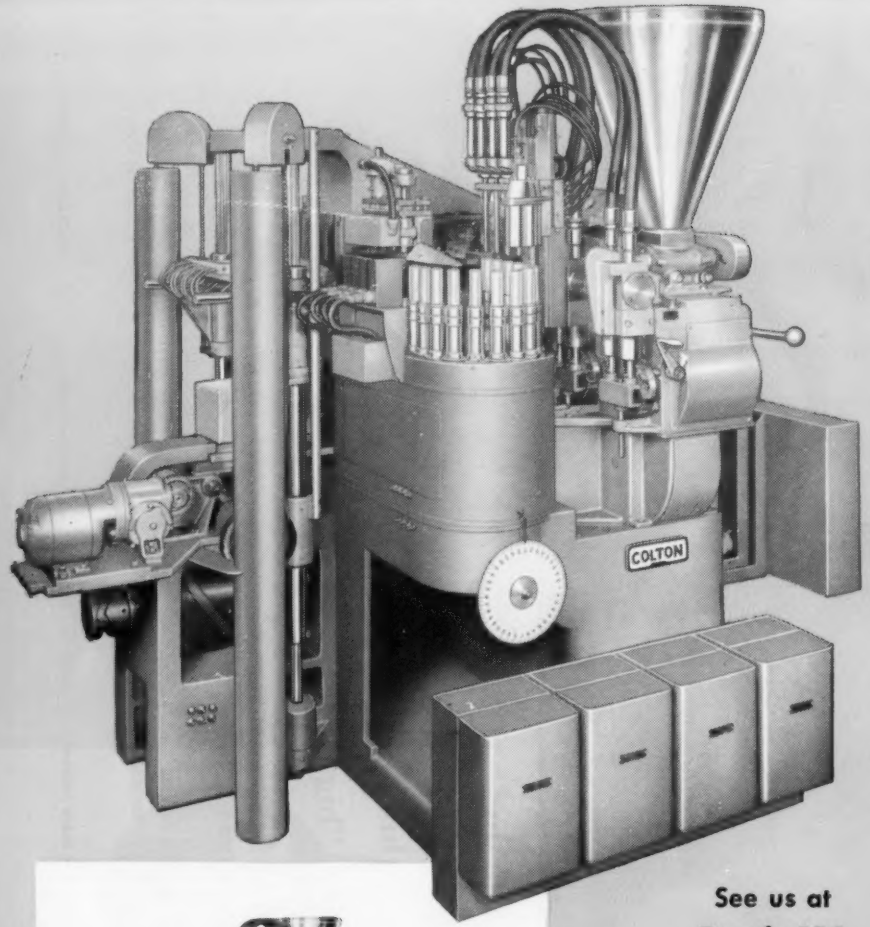
MAKE your own containers for odd-sized or odd-shaped products with fibreboard padding and "SCOTCH" Filament Tape. "Mirror surface" adhesive sticks at a touch; holds securely.

SEND FOR free booklet showing how "SCOTCH" Brand Filament Tape can help solve your heavy-duty packaging and materials-handling problems. Write on your letterhead to 3M Co., St. Paul 6, Minn., Dept. LY-96.

The term "SCOTCH" is a registered trademark of Minnesota Mining and Manufacturing Co., St. Paul 6, Minn. Export Sales Office: 99 Park Ave., New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.

↑ Circle No. 205 on Reader Service Card

Circle No. 206 on Reader Service Card →



FULL AUTOMATION is applied to tube filling in the NEW COLTON No. 185

CAPACITY: Single, 150 tubes per minute per machine; Tandem, 300.

FLOOR SPACE: Single 65″ x 96″; Tandem 65″ x 180″.

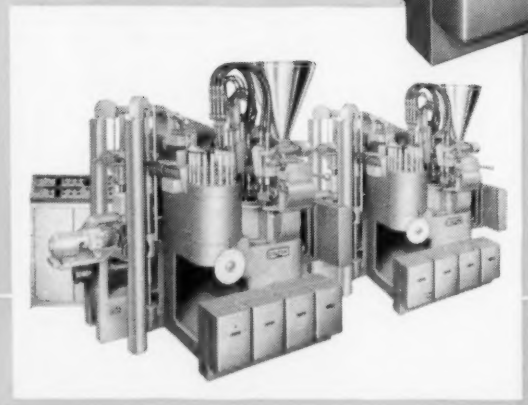
TUBE SIZES: up to 1¼″ x 7½″.

COMPLETELY AUTOMATIC in every operation:

1. **PICK-UP and LOADING** of empty tubes from box to tube holders
2. **REGISTRATION** of tube trade-mark in relation to fold in bottom of tubes
3. **CLEANING:** double-action; air blast plus vacuum
4. **FILLING:** 4 tubes at a time on each machine, positive, accurate volumetric fill, no air pockets
5. **CLOSING** with Colton double fold
6. **CRIMPING,** with or without code letters
7. **AUTOMATIC EJECTION** to cartoner

All types of extra equipment available.

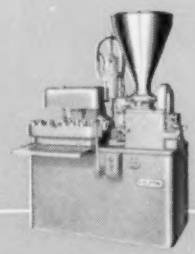
Automatic transfer between machines when used in tandem in high volume operations. Cycle adjustable to ideal speed for specific operations. This machine, finest of its kind, is typical of the advanced engineering in the entire Colton line. A few of many other items are shown below. Please send for our Filling Equipment Catalog.



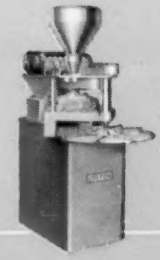
A typical Tandem installation occupying only 65″ x 180″ floor space and filling 300 tubes per minute.

See us at
Booth 426
P.M.M.I.
Exposition
Cleveland, Sept. 11-14

ARTHUR COLTON COMPANY
DIVISION SNYDER TOOL & ENGINEERING COMPANY
3566 E. LAFAYETTE • DETROIT 7, MICHIGAN
PLANT NO. 2—1630 McDOUGALL, DETROIT • PLANT NO. 3—MANCELONA, MICHIGAN
Sales and Service Engineers Coast-to-Coast
Export Office—13 E. 40th St., New York City
Offices in Principal Cities Throughout the World



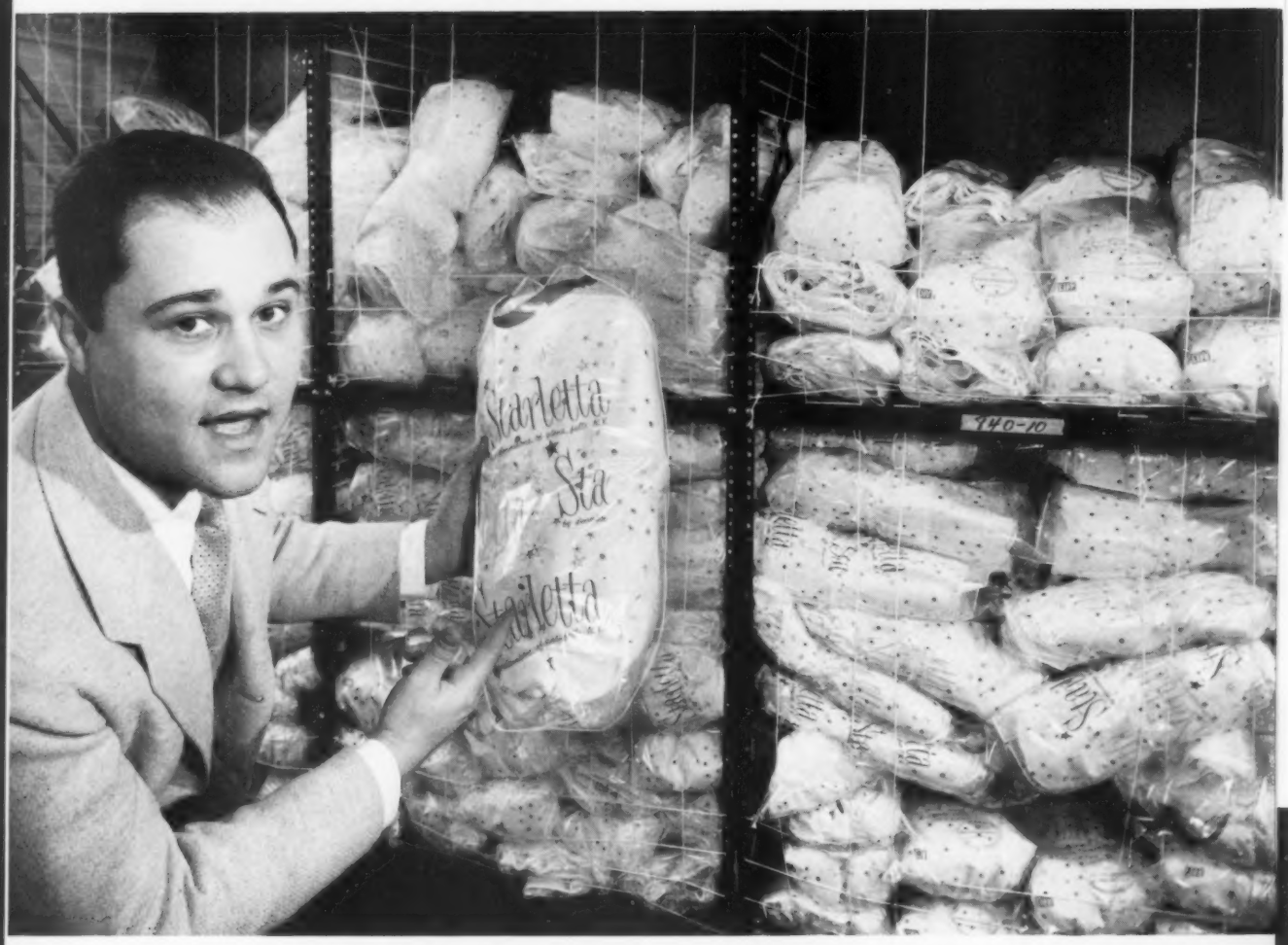
Colton No. 175
Automatic Tube Filler:
tubes per minute;
55 Single, 85 Twin.



Colton No. 126
Automatic Multiple Liquid Filler
for bottles, jars and cans.
Capacity: Up to 480
fills per minute.

Colton No. 130
Ointment Filler:
25 to 30 tubes per minute.

Combine sales appeal and utility



Polyethylene bags for Dennisons 'Starletta' bouffant slips are supplied by Bemis Bro. Bag Co., St. Louis, Mo.

this polyethylene bag is a "big plus for retailers"

Dennisons of Glens Falls, N. Y., tells both sides of the story, after packaging in film made of BAKELITE Brand Polyethylene.

Sales appeal? "The soft smooth feel of the bag imparts the sense of intimacy usually associated with delicate lingerie."

Utility? "There's a home storage problem with crisp swirling creations. Our newly-designed bag boasts an eye-catching strap. The slip or crinoline can now hang thoroughly protected in the closet without taking up undue space. Stores easily in the stock room, too."

"Our quick mix stays fresh and dry"

in handy pouches

inner-coated with polyethylene

"An inside extrusion coating of polyethylene puts this inert material right next to the contents. It protects the purity of flavor, keeps moisture definitely out, and provides a dependable heat seal," explains W. T. Troutman, president of Tromar Corp., Mt. Vernon, O.

This is only one type of coated package. You can use polyethylene coatings on paper, metal, foil, film and other package materials. Tremendous advantages are yours in marketing liquids, powders and perishables of just about every kind. Find out from your supplier all the ways he can help you benefit.

Polyethylene foil-glassine pouches for Tromar Corp. are made by Shellmar-Betner Flexible Packaging Division of Continental Can Co., Mt. Vernon, O.

Ask your supplier about . . .

BAKELITE
BRAND
PLASTICS

For more information circle No. 208 on Reader Service Card

SEE US AT
THE PM & ME SHOW
BOOTH NO. 312

Package Research & Development

BERCO is completely equipped with the SCANDIA line of Wrapping, Banding and Bundling Machinery.

Berco's Contract Packaging Service Covers:

- Designing the basic package around standard automatic machines.
- Selecting the proper packaging materials.
- Laying out wrapper designs.
- Incorporating opening-tape, code and price marks, etc. into design of package.
- Multiple-packaging and bundling applications.
- Production runs, starting with small quantities for market-testing, seasonal packaging, holiday requirements, and special merchandising deals.

MEMBER
18th Annual Forum
Sept. 10-12, 1956
Hotel Statler
Cleveland, Ohio

BERCO
Package Research & Development

BRONANDER ENGINEERING & RESEARCH CORP. • NORTH ARLINGTON, N. J.

SCANDIA

will be at

PM & ME

EXPOSITION

AT

CLEVELAND

SEPT. 11th TO 14th

Exhibiting the New

MODEL "100"

FULLY AUTOMATIC

WRAPPING • MULTIPLE WRAPPING
BANDING & BUNDLING MACHINE

Now FOR THE FIRST TIME IN THE HISTORY OF PACKAGING MACHINERY, ALL OF THESE OPERATIONS PERFORMED ON ONE MACHINE!!!

MEMBER
18th Annual Forum
Sept. 10-12, 1956
Hotel Statler
Cleveland, Ohio

PACKAGING MACHINERY MANUFACTURERS INSTITUTE
PMMI

SCANDIA

Manufacturers of Better Packaging Machinery

500 BELLEVILLE TURNPIKE • NORTH ARLINGTON, N. J.

MANUFACTURED UNDER BRONANDER PATENTS

all the **CRACKERS** you sell deserve the protection of

WAXED GLASSINE

How Famous Brands Prove...

More Sales Power Per Package ...with Waxed Glassine

Waxed Glassine inner wraps combine with outer wraps of Waxed Paper...produce modern protective packaging that really sells!

- **Flavor protection** Seals in and safeguards all that desirable "just-baked" goodness... flavor that keeps customers coming back for more. And satisfied shoppers mean satisfied retailers!
- **Freshness protection** Fights grease penetration, locks out moisture, assures a fresher, crisper product with longer shelf and pantry life. Double protection, too! Inner wraps of Waxed Glassine, and outer wraps of Waxed Paper promise lasting freshness of unused sections. Easier to open and reclose. Contents won't stale! Fewer returns or lost sales to shrink profits!
- **Appetite appeal** Fresh, clean Waxed Paper overwraps picture the product at its appetizing best, prompt more on-the-spot sales, pull more repeat customers!
- **Brand identification** Waxed Paper lets you use entire package for powerful all-over sales-winning designs. Familiar colorful label stands out from competition, prompts purchase by brand. Rugged self-sealing wrap handles easily on the machine, passes every shipping, in-store and consumer handling test.
- **Lower cost** Lower basic wrapping costs plus constant, dependable supply combine with other Waxed Glassine advantages to produce packaging that reaches out and sells! Result: increased *net* profits for you!

Waxed Glassine teams up with the experience, facilities and services of the nation's top converters to deliver modern packaging and product protection that pays off in bigger business—and the job doesn't stop here!

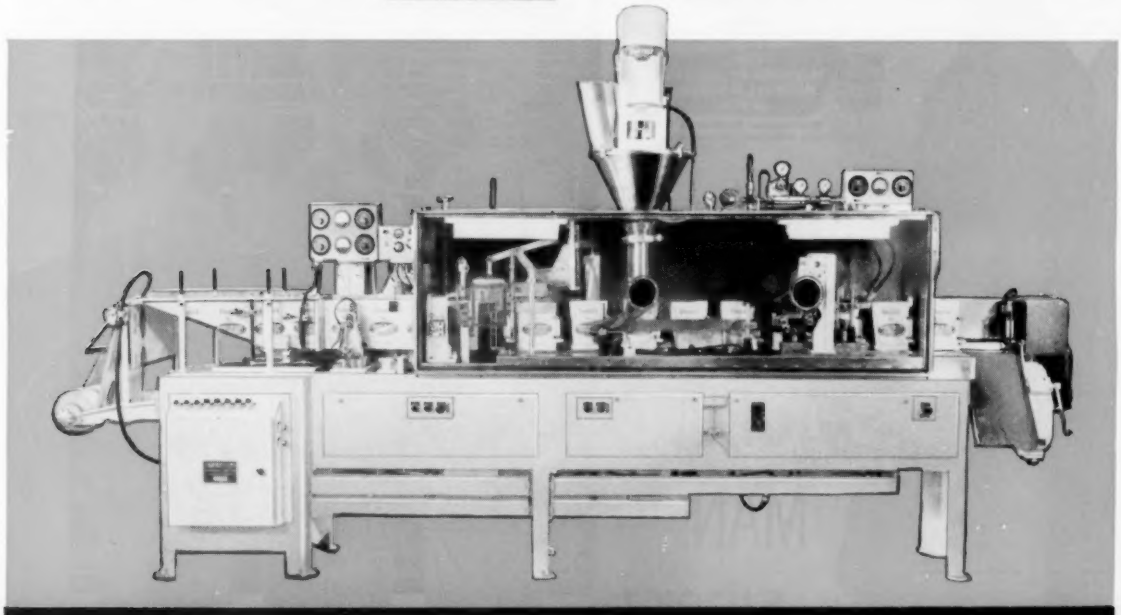
Traffic-stopping *designs*, actual *samples*, proved *sales ideas*, complete *cost sheets* show how Waxed Glassine pays off in better packaging, higher brand profits! See your Waxed Paper salesman today. Or write or telephone us direct.

W PROTECTS FRESHNESS AND FLAVOR P

WAXED PAPER MERCHANDISING COUNCIL, INC., *38 South Dearborn Street, Chicago 3, Illinois, Telephone: STate 2-8115*

FAST, AUTOMATIC PACKAGING

under inert gas... protects food products at low cost



Bartelt Packager... Forms Package from Roll of Stock... Fills and Seals... and Automatically Cartons

Special adaptations of Bartelt Packaging Lines illustrate the tremendous versatility of which they are capable. Above you see a gas-pack machine made up of basic Bartelt units which fill under inert gas.

FILLS ONE POUND

The package formed contains *one pound* of a Dean's powdered milk product. French's Instant Potato is also packaged in pouches under inert gas, and then cartoned on the standard Bartelt Cartoner. Many other products can be protected, with 2% or less oxygen content, by automatic inert gas packaging. The Bartelt Packaging Line will handle a wide variety of sizes of pouches made from various heat-sealing roll stock. Write for complete information, on gas packaging or any other types of pouch or carton packaging.

BARTELT ENGINEERING CO.

1900 HARRISON AVENUE
ROCKFORD, ILLINOIS
New York Office, 370 Lexington Ave.

"Machinery for Creative Packaging"

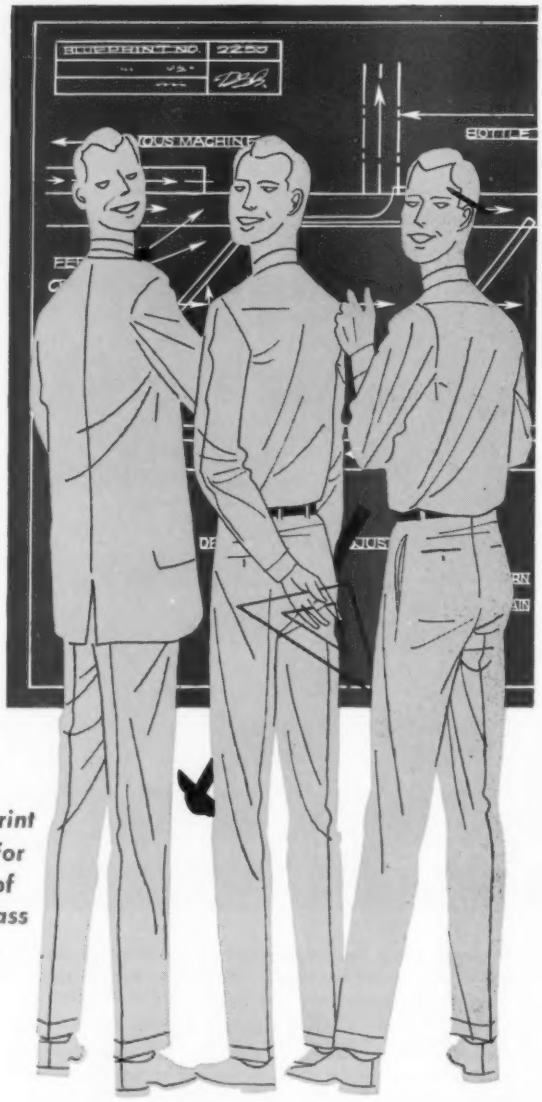
See us in Cleveland...

THE PACKAGING MACHINERY & MATERIALS EXPOSITION of 1956

September 11 thru 14

Cleveland Public Auditorium - Cleveland, Ohio

CALL THE WORLD MAN FIRST!



In the blueprint stage — or for any problem of labeling glass containers — call your WORLD Sales Engineer

Whatever your problems in labeling, it pays you to get complete, unbiased information right from the start.

Your WORLD Sales Engineer will give you just such information. He won't try to sell you on a "specialized" type of label, for he represents the one manufacturer of a complete line of labelers — the world's largest manufacturer of automatic bottle labeling machinery.

The WORLD Salesman — a graduate engineer — and the 55 years cumulative experience of the company behind him, can help you solve your problems efficiently and save you money. Call him!

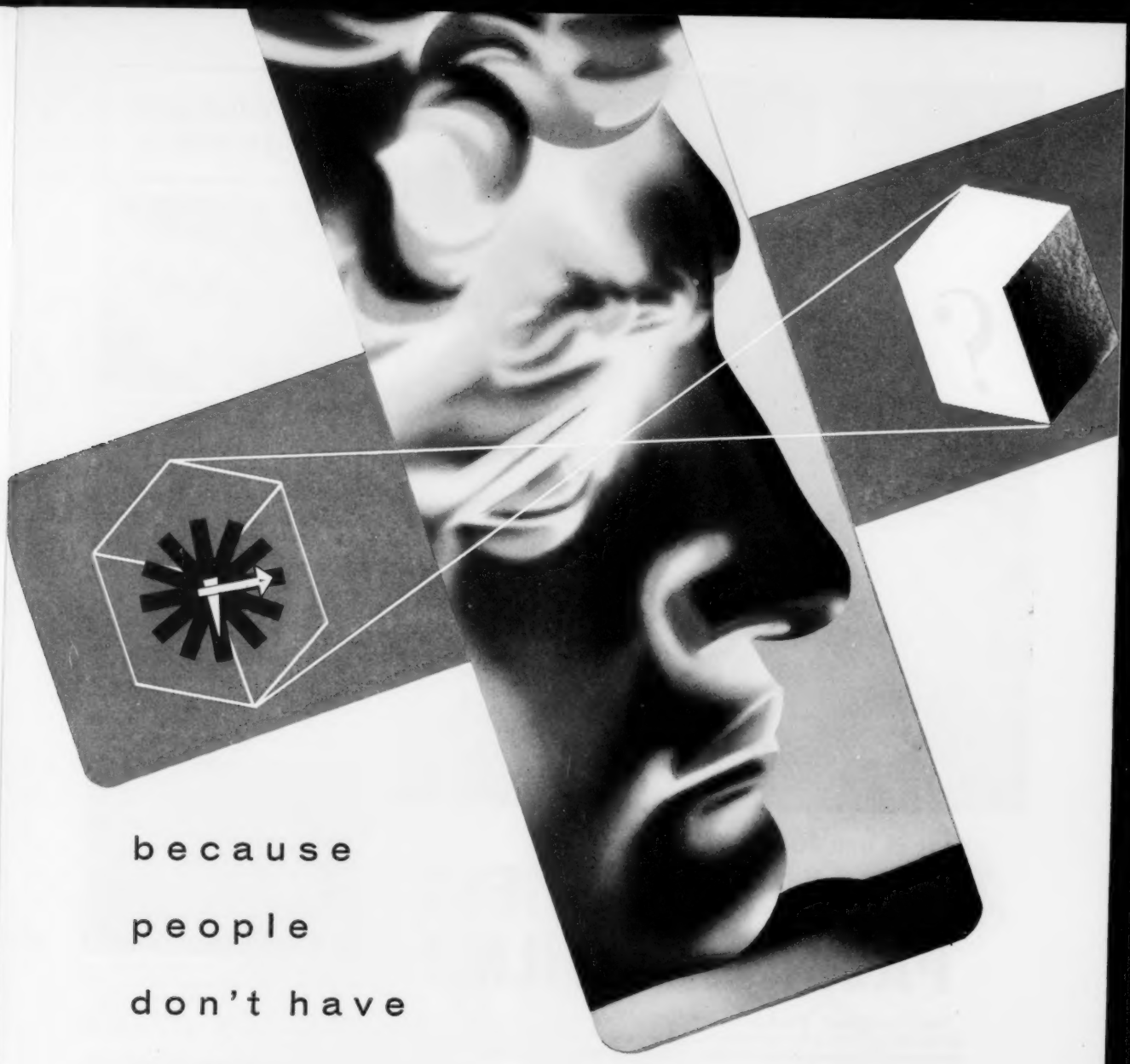
ECONOMIC MACHINERY COMPANY, 60 Fremont Street, Worcester 3, Mass.

Division of Geo. J. Meyer Manufacturing Co.

YOU'VE GOT THE BEST IN THE WORLD

↑ Circle No. 213 on Reader Service Card

Circle No. 214 on Reader Service Card →

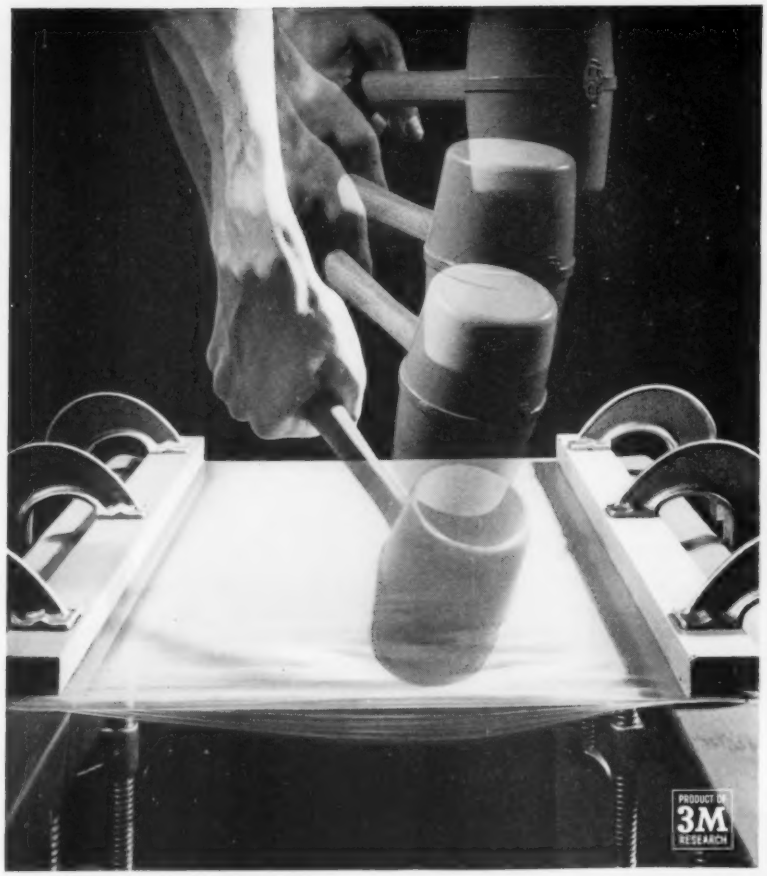


because
people
don't have
x-ray
vision...

The container must sell your product! That's why a creative approach for containers is all important. And, that's why Stone has developed new techniques . . . new printing processes . . . new pattern background papers . . . and unusual design ideas to project the full sales appeal of the product to prospective customers.

STONE CONTAINER CORPORATION

4200 WEST 42nd PLACE—CHICAGO 32, ILLINOIS—Plants and sales offices in most principal cities



Got a use for the

WORLD'S TOUGHEST PACKAGING FILM?

New "Scotchpak" Brand Polyester Film is *heat sealable!* Seal is as tough as film itself! Perfect for difficult packaging jobs where inertness and protection to the shipping material under extreme temperatures are essential.

Resists most solvents and chemical attacks. Has high moisture inertness. Easily heat sealed (275 to 359 F. at 20-60 psi). High tensile strength.

"Scotchpak" Polyester Film is ideal for packaging the following varied substances: cosmetics, acids, syrups, silverware, oils, greases, adhesives, asphaltic products, catsup and mustard, surgical dressings and many others. Also suited for container liners, insulation pillows . . .

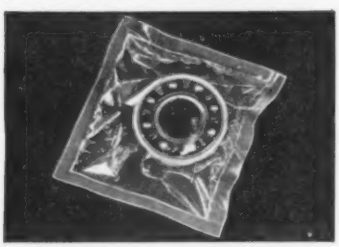
Where can *you* use new "Scotchpak" Polyester Film?

"SCOTCHPAK"
TRADEMARK
BRAND
POLYESTER FILM
HEAT-SEALABLE

Look what you can do with it

CHEMICALS or acids of most any type are packaged easily, handled safely, shipped surely in heat sealable containers of new "Scotchpak" Polyester Film.

FOOD is packaged safely, temptingly in clear, transparent "Scotchpak" Polyester Film. Contents may be easily frozen . . . even boiled right in the package! Low gas penetration rate. Non-toxic.



MACHINE PARTS can be packaged dry or in oil or grease to eliminate corrosive action. Packages are transparent, easy to handle, easy to ship and store. Simplifies *identification* and issuing of individual parts and units.

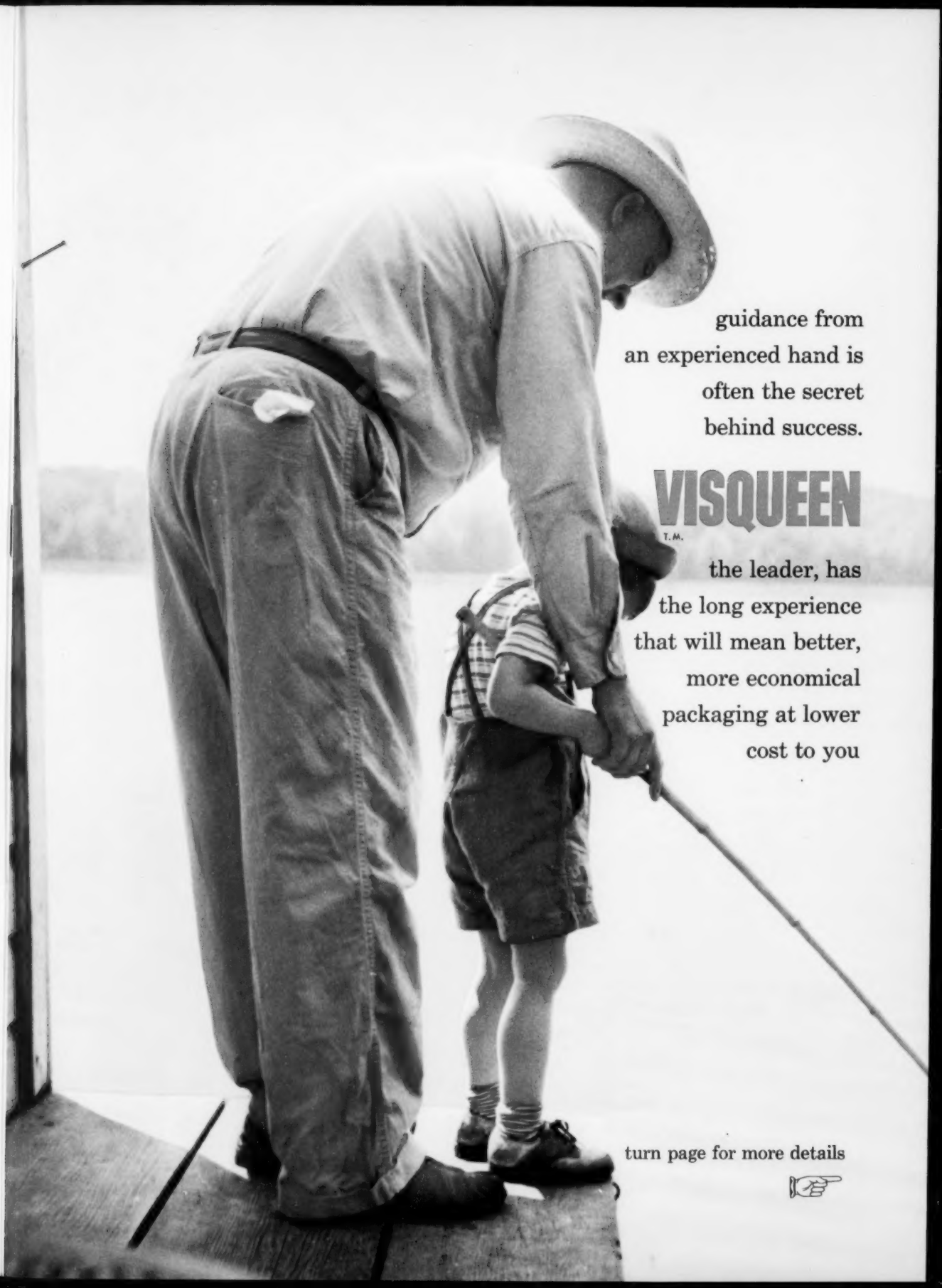
FREE FOLDER shows dozens of new ideas on how you can solve your most difficult packaging and shipping problems using new "Scotchpak" Polyester Film. Write on your Company letterhead to Film Products Group, 3M Co., St. Paul 6, Minn., Dept. LY-6.

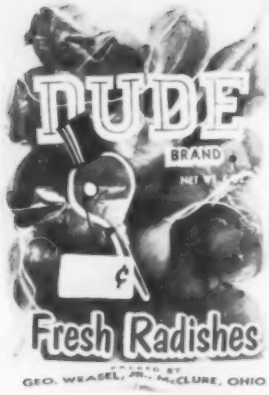
Made in U.S.A. by Minnesota Mining and Mfg. Co., St. Paul 6, Minn.—also makers of "Scotch" Brand Pressure-Sensitive Tapes, "Scotch" Brand Magnetic Tape, "Underseal" Rubberized Coating, "Scotchlite" Reflective Sheeting, "Safety-Walk" Non-slip Surfacing, "3M" Abrasives, "3M" Adhesives. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P.O. Box 757, London, Ontario.

3M COMPANY

↑ Circle No. 215 on Reader Service Card

Circle No. 216 on Reader Service Card →


guidance from
an experienced hand is
often the secret
behind success.
VISQUEEN
T.M.
the leader, has
the long experience
that will mean better,
more economical
packaging at lower
cost to you
turn page for more details



says George Weasel, Jr.—McClue, Ohio

"VISQUEEN film is the greatest packaging material we've ever used! Fabricates easily. Fills and closes-in-a-wink, too. But more than that we get our brand name on the package . . . right where housewives can't miss it. Keeps them coming back for more DUDE Brand radishes. Pexco makes our bags."

6 exclusive advantages you get only with VISQUEEN® film

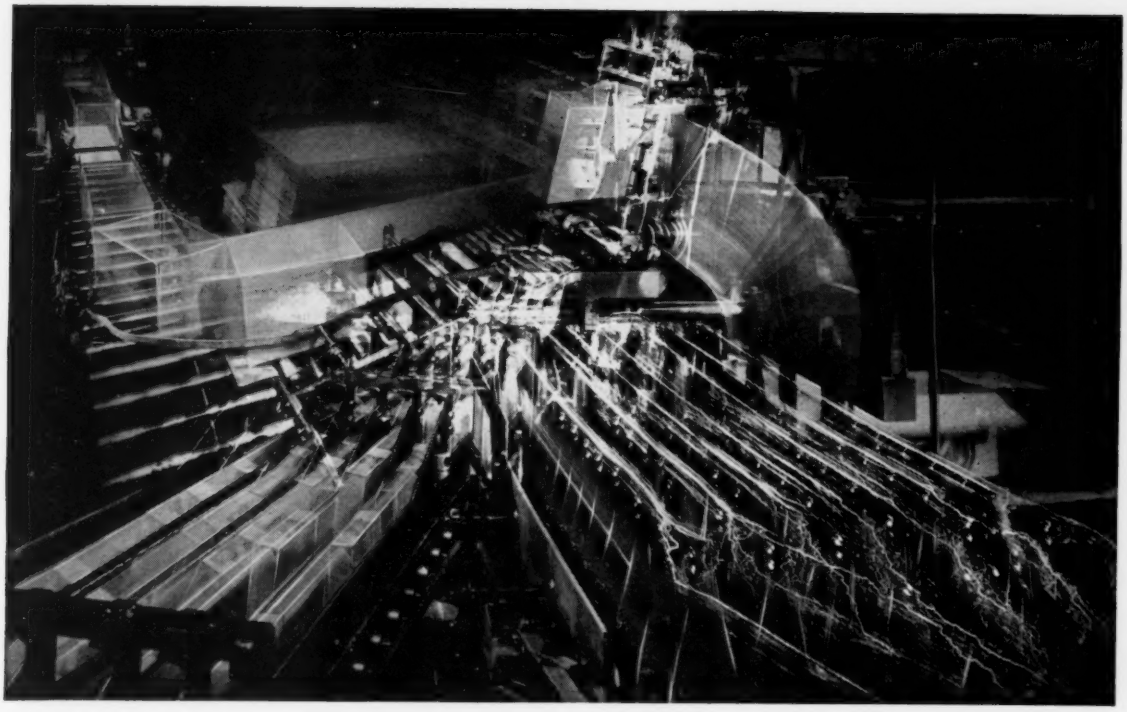
NATIONAL SALES FORCE of trained technical representatives to assist you.
PACKAGE ENGINEERING EXPERTS to help you with polyethylene packaging problems.
MODERN LABORATORY FACILITIES to test any polyethylene film for your protection.
NATIONAL ADVERTISING PROGRAM to promote the use of polyethylene only.
LARGEST SELECTION of specially developed, superior quality polyethylene films.
THREE LARGE PLANTS producing only polyethylene film to serve you better.

Important! *VISQUEEN film is all polyethylene, but not all polyethylene is VISQUEEN. Only VISQUEEN has the benefit of research and resources of The VISKING Corporation.*

information request tag
VisQueen®
clip this tag.
attach to letterhead, mail.

P E 9

THE VISKING CORPORATION
World's largest producers of polyethylene sheeting and tubing
Plastics Division, Terre Haute, Ind.
IN CANADA: **VISKING LTD.**, LINDSAY, ONTARIO • IN ENGLAND: BRITISH **VISQUEEN LTD.**, STEVENAGE



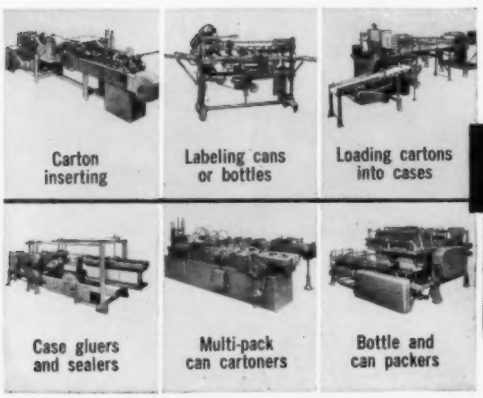
Packages in motion toward lower costs

ABOVE: *Composite motion study of a Standard-Knapp Model 830 Bottle Packer and a Model 800 Carton Packer at work reducing costs of bottle and carton case loading.*

On a Standard-Knapp 830 Bottle Packer, your containers move with quick precision into shipping cases. You are assured of a full load pattern every time. Steel fingers guide containers exactly into position. Each case is raised to receive the pack by means of a lift table which is cushioned as an assurance against damage to container or case.

The same smooth, constant-flow motion is obtained with Standard-Knapp Carton Packers. Each step in the packing operation is devised to combine maximum efficiency with gentle handling action. But that's not all — you can count upon continuity of operation.

Every motion of a Standard-Knapp machine is delivered by a mechanism ruggedly and precisely constructed to remain efficient under continuous 24-hour operation — dependability is inherent in S-K design, construction and performance. You take no chances with Standard-Knapp equipment. It steadily keeps your packaging costs moving downward. For more information about our Can, Bottle, Carton and Bag Packers and other packaging equipment, write Dept. O for our catalogs.



STANDARD-KNAPP

Visit us at booth 422
Packaging Machinery & Materials Exposition
CLEVELAND SEPT. 11 - 14

DIVISION OF EMHART MFG. CO.

PORTLAND, CONNECTICUT

Latin American Representatives: American Steel Export Co., New York, N. Y.

← Circle No. 216 on Reader Service Card

↑ Circle No. 217 on Reader Service Card

SPECIFY A

DOW CORNING *SILICONE SURFACE*

increase filling rate by as much as 80%

Better slip • Less wedging • Fewer jam-ups

reduce line breakage by as much as 50%

Greater resistance to bruising and scratching

improve appearance for life of container

Permanent protection • Won't wash off

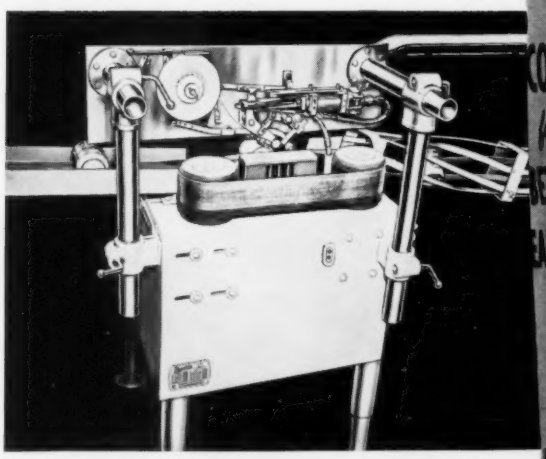
available at little or no additional cost

specify glass containers with a Dow Corning SILICONE SURFACE . . preferred by leading brand-name packers and container manufacturers.

for more information write

DOW CORNING CORPORATION
MIDLAND, MICHIGAN

first in silicones



Pfaudler Outsert Applicator attaches message to your package, automatically. Eliminates costly hand labor. Places outfold accurately. Becomes part of production line, between labeler and casing machine.

Now you can

Outsert Leaflets

on packages like this

without hand labor!

Revolutionary new machine attaches recipes, contest rules, coupons, etc., *automatically*—up to 220 per minute!

To bring you the sales advantages of *outside message attachment*, without slowing down your production line or using costly hand labor, Pfaudler has perfected the fast-action Outsert Applicator, Model OA-3MC.

This efficient machine puts your message precisely where it belongs on your package. There's no chance of sloppy hit-or-miss location of the outfold covering your brand name or trademark, as often happens with hand labor.

Up to 220 containers per minute

The Pfaudler Outsert Applicator attaches your consumer messages to all cylindrical containers of plastic, glass, paper or metal—$2\frac{5}{8}$" to $7\frac{1}{4}$" in length, $1\frac{1}{4}$" to $6\frac{1}{2}$" outside diameter. (Special designs are possible for containers outside these limits.) Speed varies slightly with container size.

Fits right into production line

The unit fits readily into most production line setups, requires only four square feet of floor space. There, it works in continuous operation, gripping free rolling containers from your labeling machine and forwarding them, with leaflet accurately attached, to the casing machine, ready to pack and ship.

Low maintenance

Advanced design and careful selection of materials give you a durable machine, capable of long continuous runs. And there are no delicate mechanisms to fail.

If you're interested in the sales advantages of outserts for your product, simply forward a sample labeled container with outsert affixed correctly. Pfaudler engineers will analyze your requirements and send you full information. Or, if you prefer, write for Bulletin 933. There's no obligation, and you're the one to benefit.

THE PFAUDLER CO. Pfaudler **ROCHESTER 3, N.Y.**

Sheffield—first to put toothpaste in tubes, in 1892—has served packagers for over half a century in producing billions of tubes for—

MEDICINAL ointments—salves—jellies—extracts.

DRUG AND COSMETIC pastes—creams—shaving preparations—deodorants—depilatories.

INDUSTRIAL AND HOUSEHOLD cements—adhesives—compounds—greases—paints—fillers—food pastes, syrups, and creams.

HAVE YOU A PRODUCT THAT'S *BETTER* PACKAGED IN TUBES?

Sheffield Tube-Package Engineering . . . . the vigorous science of designing, creating and producing the collapsible metal tube most perfectly suited to your product—your marketing needs . . . . . is yours for the asking.

The Sheffield Process . . . . an exclusive method of manufacturing collapsible metal tubes—is the result of four generations of study, research and manufacture which assures you safe, economical, highest quality tubes.

The Sheffield Technically Trained Representative . . . . will gladly explain how Sheffield technical superiority can insure the efficient and dramatic packaging of your product. He is more than just a salesman: he is a technician highly trained in the science of collapsible metal tube packaging.

For full information on Sheffield Tubes, write for our free brochure . . . no obligation, of course!

THE SHEFFIELD TUBE CORPORATION

HOME OFFICES · NEW LONDON, CONN.

W. K. SHEFFIELD, V. P. CHAS. ARCH (CHICAGO AREA) F. C. SHEFFIELD

NEW YORK 18, N. Y., 500 5th AVE. BROADVIEW, ILL., 2850 CONGRESS EXPRSSWY LOS ANGELES 38, CAL., 7024 MELROSE AVE.

EXPORT: 500 FIFTH AVE., N. Y. CABLE "DENTIFRICE", NEW YORK

New England SHEFFIELD PROCESS TUBES

Multiple use of rotating tables cuts line stoppages, boosts production

Problems of frequent line stoppage (even though of short duration) as well as the furnishing of an adequate container supply to packaging machinery plague many a company. To avoid these difficulties, Vick Chemical Company uses a series of rotating tables along a packaging line. Its experience proves the efficacy of the engineering underlying the development of equipment used on its lines.

By developing and using a series of rotating tables, Vick Chemical Company, has virtually eliminated stoppages along its packaging lines. Further, the use of these devices results in an increase of output eight to ten per cent over that sustained without the operation of such tables.

Also, this extensive use of rotating tables contributes to definite savings in packaging line space. These lines would have to be substantially longer in order to provide adequate backlogging at various points. Further, because the movement of glass is relatively gentle, there is much less shock than otherwise would be present. There is practically no breakage attributable to glass movement on packaging lines.

Robert E. McCuiston, chief development engineer of the Vick organization, who is located at the Greensboro, North Carolina, plant, has worked out the design and installation of this equipment over a period of years. Also, he has dovetailed these units into coordinated operation not only with standard items of packaging machinery but also with a filling operation of his own design. While his organization has unusually complete machine design facilities, the normal practice of this company is to install standard machinery units wherever practicable.

Empty Jars Leave Cases

Taking just one packaging line as illustrative of the Vick approach to the handling and movement of glassware, attention focuses on a line assigned exclusively to one and one-half ounce jars of Vicks Vaporub. Starting point of this line is a rotating table located in the basement. It is here that the movement of empty glassware begins.

This rotating table is four feet in diameter and operates at eight r.p.m., using a one-quarter h.p. reduction gear head motor. Positioned over the table are stationary metal guides that direct the flow of empty jars into a single file.

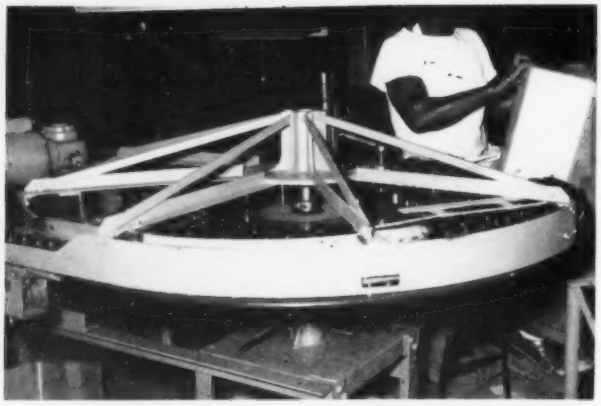
Standing alongside of the table, and within easy reach of the attendant, is an inclined conveyor. This holds cases of empty jars. The attendant takes a case, removes the jars, and places them on the rotating table — open ends down.

Moving into single file, these jars leave the table and move into an air cleaning unit. The actual transfer is closely timed so that each jar lands on the nozzle or jet of the cleaning unit. Each such nozzle protrudes up like a stem and acts as a holder for each jar during its movement through the cleaner.

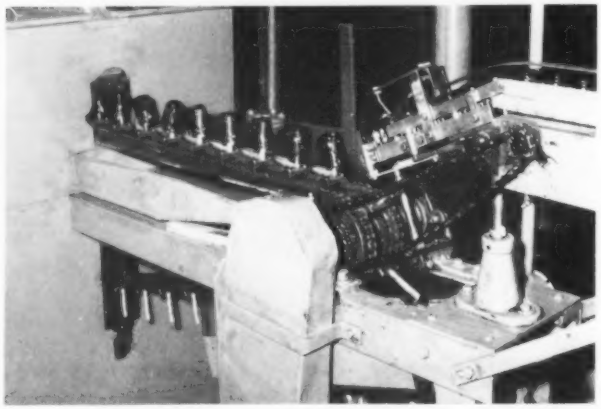
Use Of Moving Nozzles

This machine is a hooded, inverted air cleaner. The series of moving nozzles on which the jars ride moves around a track like an endless belt. Each moving nozzle passes over a stationary nozzle through which the air moves. Although the machine operates as fast as 300 jars a minute, each moving nozzle is aligned over a stationary nozzle long enough for a blast of air, at 100 p.s.i., to enter each jar.

Another feature of the unit is a vacuum dust collector system. Mechanical operation of the machine utilizes a cam action to govern the transfer of each jar to a nozzle. The cam also controls the air nozzle movement.



Used for delivery of empty jars to an air cleaner, this four-foot table operates at eight r.p.m. Stationary metal guides direct the flow of empty jars into single file — as seen at left. Supplies of empty glassware are delivered to a loading point within easy reach of attendant, as at right.



About to enter the air cleaner at left, these empty jars rest on the upward protruding nozzles of the cleaner. When these moving nozzles pass over the stationary nozzles, an air blast goes into each jar. Transfer of jars from the conveyor (at right) to the nozzles is closely timed; the air cleaner operates at speeds as high as 300 jars a minute.

Before introduction of the present method, the old way of handling empty jars required manual stacking and emptying of wood trays of jars. The operation required two attendants at the filler instead of just one. Under the former operation, there was no circulating table.

While this rotating table serves principally one packaging line, it is designed to feed a second line. Ordinarily, it feeds either one line or the other, but by adding a second attendant it is possible to feed both lines simultaneously from the same table.

There is a slightly different table for handling tapered bottles. This unit receives the bottles right side up and directs them through the air cleaner in this position. What happens is that the bottles pass through a turning unit where they are transferred to horizontal position by a blast of air. This air action assists in transferring each bottle to a nozzle. Once it gets on its nozzle, a bottle rides along in the same way as in the unit described above.

Move To Packaging Floor

Returning to the first rotating table operation, the jars leaving the air cleaner (from which jars transfer) move off their nozzles and drop to another rotating table — landing right side up. By this time they have reached the floor above. How this movement takes place is that the nozzle conveyor actually serves as an inclined elevating unit, rising to the level of the table on the packaging line floor.

Purpose of this table is to accumulate the empty jars and deliver them in a double file for movement into the filling machine. Moving on a flat top chain conveyor the bottles pass under the filling orifices. On each side of the filler two bottles fill at the same time. The filling action on each side alternates with the other side. This machine can fill any predetermined amount from one gram up, and at speeds as high as 300 jars a minute.

The filler has a variable speed pump and interrupting distributor mechanism. As a result, the flow itself is not interrupted. This flow passes into a rotary table and then turns into a stator.

From here the flow of product goes through a series of distributor rings. This directs the flow automatically back and forth. Then it goes through manifold nozzles. There is a cam action that controls the escapement on this machine. It also controls the

dwell time. After receiving their fill of product the filled jars pass to a rotary table. Here they are guided back into a single line.

At the time of filling the product temperature is in excess of 100 degrees F. Since it is necessary to have the product more or less at room temperature for capping, there is a refrigerated cooling tunnel through which jars move. This rotating table serves as the point of entry into the cooling equipment.

By the time the jars leave the cooling tunnel the product temperature is approximately 70 degrees F. Now, they move through a standard Consolidated capper. Leaving it, the capped jars pass to a rotating table.

The table at this point as well as the one at the filler is three feet in diameter and operates at eight r.p.m. with a one-quarter h.p. motor. In connection with the table located after the capper, there is an S-shaped conveyor leading to a Standard-Knapp roll-through labeler. Before entering the labeler jars are turned 90 degrees in order to go through the machine horizontally.

Return Line Function

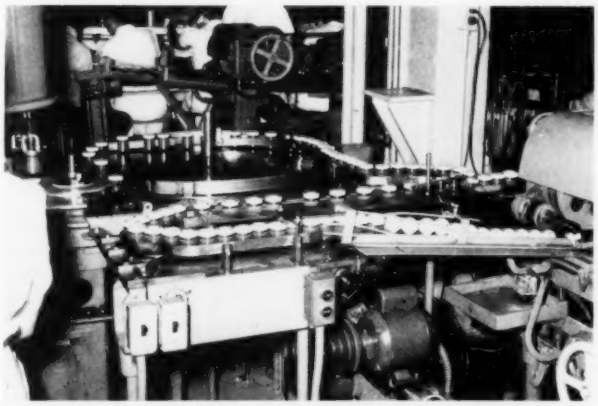
A special feature of the conveyor operation before the labeler is the use of a return line. Any defectively or improperly labeled jars are removed. An attendant soaks off the labels and places the jars on the return conveyor. A timing device feeds these jars into the main flow of jars entering the labeler. However, there must be a backlog of jars awaiting return to the labeler.

Every 60 seconds a switch opens, providing there is a backlog. This backlog is necessary in order to have the back-up switch in raised position. Unless there are enough jars on the return conveyor, the back-up switch remains in down position. If enough jars are present, and the switch is in raised position, the timing device actuates. It permits the flow of jars on the return conveyor to move to the conveyor entering the labeler.

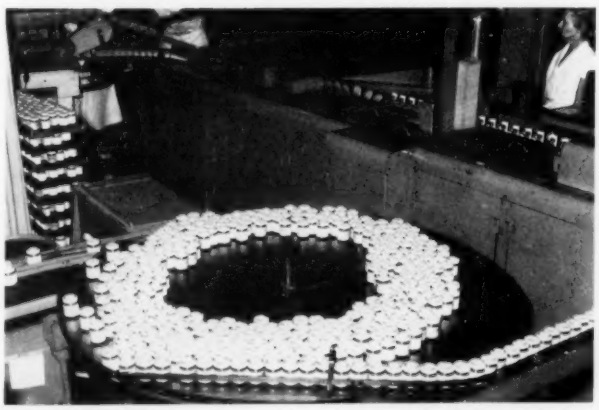
Leaving the labeler, jars pass to a rotating table on which they move prior to entering a Jones cartoner.

(Continued on Page 43)

In contrast to the old way, the present method provides rotating tables both before and after the filler — a specially built unit which fills two bottles on each side at the same time. One attendant supervises the entire operation. Equipment just behind air cleaner conveyor is part of the cooling tunnel.



Located just ahead of the labeler, this rotating table has a return conveyor. This facilitates handling of any jars requiring relabeling. Such jars enter the timed sequence with main flow — as seen in upper right. Jars leaving conveyor are tipped 90 degrees for movement through labeler.



Serving primarily as a backlog or reservoir, this table is four feet in diameter and runs at twelve r.p.m. Labeled jars enter at left and move to infeed conveyor of cartoner — as seen at right. Metal guides direct the flow of jars.

Mark K. Dresden is an alumnus of Swarthmore College. Since 1934 he has been associated with A. H. Wirz, Inc. His experience includes considerable accounting and financial activity as well as management and sales. Prior to joining Wirz, he was with Scott Paper Company. His association activities include Packaging Institute and Collapsible Tube Manufacturers Association.

Intricacies of screw threads for collapsible tubes

By Mark K. Dresden
President, A. H. Wirz, Inc., Chester, Pennsylvania

Here is a searching piece of investigation of a common source of difficulty. Mr. Dresden's examination of the concept of triangles, that of pitch diameter, as well as the matter of thread angle sheds considerable light on the sometimes elusive proper fit of threaded male and female parts — such as a tube neck and its closure. His careful calculations in support of his points deserve the attention of users and suppliers alike.

I had an experience a few weeks ago involving the proper fit of threaded male and female parts. I found that this subject is one of the most interesting and at the same time most frustrating fields for the uninitiated to explore. If the parts go together properly, great satisfaction is had by all concerned, but if they do not fit satisfactorily, it is a real problem to find the reason why.

Specifically, in the collapsible tube industry, a sincere and determined effort has been made over the past few years to standardize on the type of thread used on tube necks and tube caps. The experience which directed my attention to the problem involved a tube user who wished to have a private design cap, and worked out detailed specifications for the cap, generally following our industry standard specifications. But in order to improve the fit of the cap, it made some modifications generally tightening up on tolerances.

On paper, there was no reason at all why the specifications should not work, but in actual practice, they didn't. In trying to find out why, I made some study of the general subject, and have endeavored to set down some facts which were most interesting and helpful in connection with my specific problem—as well as the general understanding of the subject of screw threads.

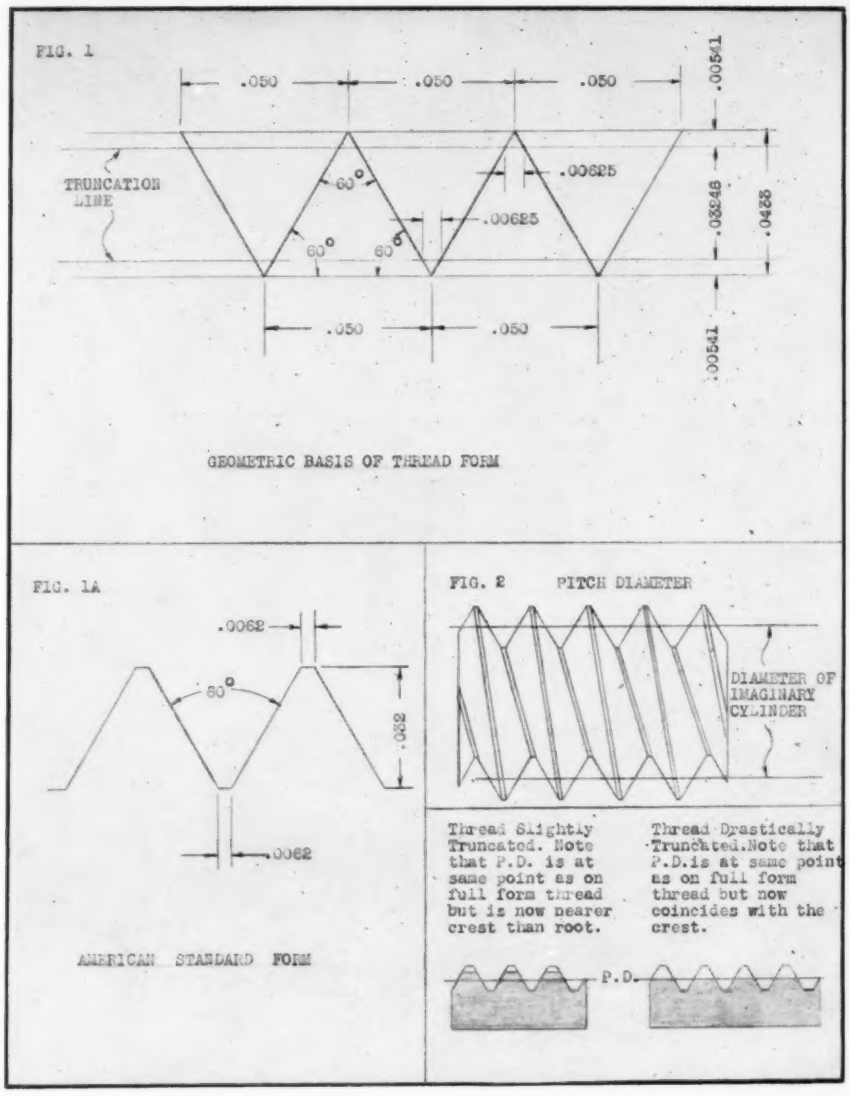
Our industry has adopted a 60°-20 threads per inch American standard thread form as our standard thread, and the balance of this article is concerned with this type of thread. See Figure 1A.

Concept Of Triangles

In analyzing any problem having to do with threads, a number of things are important. In the first place, given a 60°-20 threads per inch standard, we have a triangle, or better a series of equilateral triangles which are fundamental to the study of the thread. Each angle is 60° and since there are 20 threads per inch, the base, and each side of the full triangle is 1/20″ or .050″. The altitude of this triangle works out trigonometrically to .0433″.

The actual thread form is not a complete triangle since it would be impractical, if not impossible, to form threads which come out to a perfect point. For this reason, the triangle is truncated. In the American Standard form, the width of the flat after truncation is specified to be the number of threads per inch divided by eight.

This brings the flats of our Industry Standard thread form to .00625″ or $\frac{.050}{8}$. The altitude of both the



1. Geometric basis of thread form.

1A. American standard form.

2. A comparison of pitch diameter, and both slightly and drastically truncated threads.

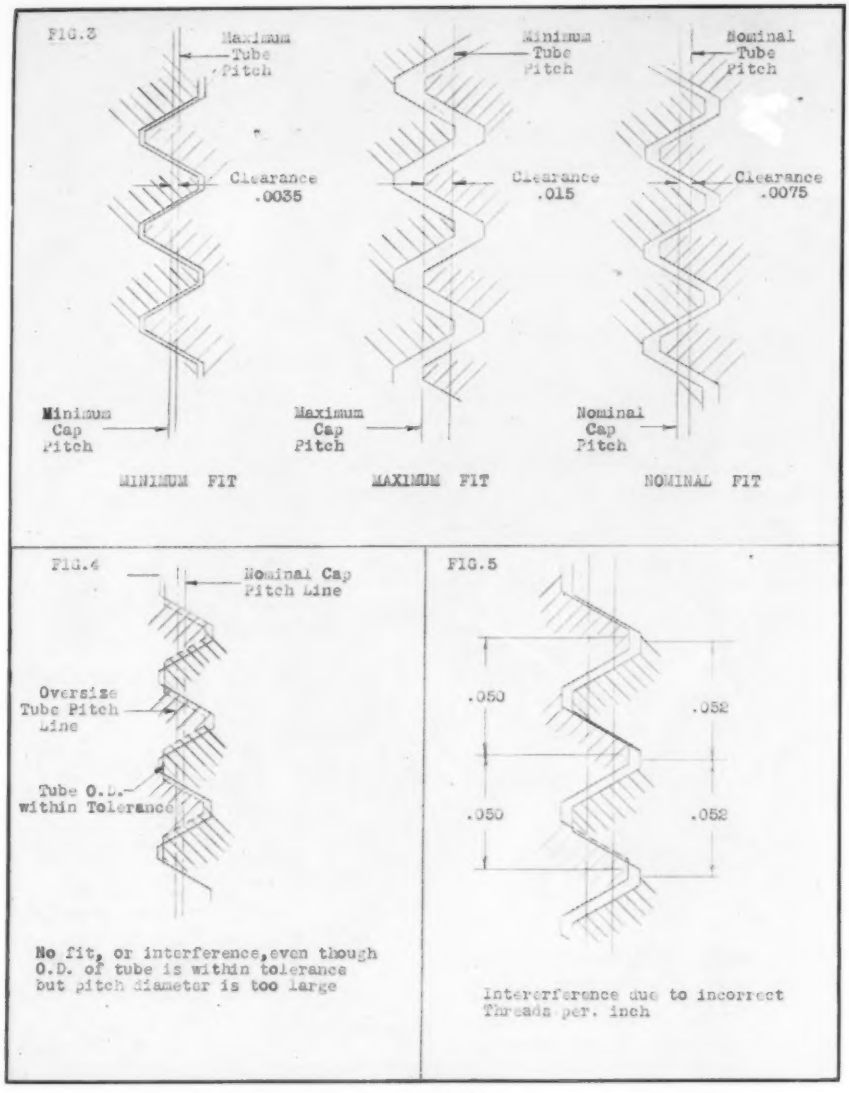
little triangles that are cut off by truncation is .00541" and thus the theoretical thread height works out to the altitude of the full triangle, reduced by the altitude of the two little triangles taken off the top and the bottom of the thread, and comes out to exactly .03248". See Figure 1.

Look At Pitch Diameter

In considering what may be wrong with the thread, one of the most important characteristics is the pitch diameter of the threaded piece. The pitch diameter is the diameter of an imaginary cylinder, the surface of which would pass through the threads at such points as to make equal the width of the threads and the width of the spaces cut by the surface of the cylinder.

This can be stated more simply, namely, that the pitch diameter is a diameter exactly half way between the major and the minor diameters of the thread. See Figure 2. It is particularly interesting to note from the drawing in the lower right hand corner of Figure 2., that even if the outside diameter of the thread is way out of specification, a good fit will be obtained if the pitch diameter is correct.

The method of measuring pitch diameters is somewhat cumbersome but quite accurate. Three wires are laid into the thread, two on one side and one on the other side, and a micrometer reading is taken across the wires. For convenience, on a 60°-20 thread per inch form, a wire size of .02887" diameter is best. By



3. Examples of minimum, maximum and nominal feed.

4. No fit, or interference even though O.D. of tube is within tolerance — pitch diameter is too large.

5. Interference due to incorrect thread per inch.

trignometric computation, the micrometer reading can be converted to the pitch diameter of the thread in question.

A Working Formula

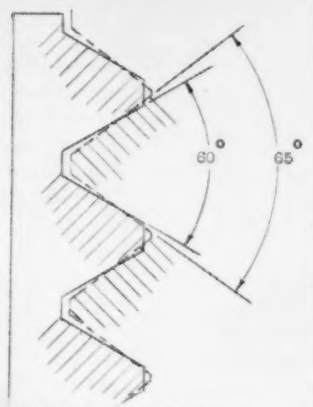
This formula is: Pitch diameter (E) equals the measurement over the wires (M) plus the height of the basic triangle, .0433", minus three times the diameter of the wires, .0866", used for measuring. For instance, in the case of a #16 industry standard neck, the pitch diameter should be .343" (.375" minus .032") and should result in a measurement using .029" diameter wires of .386".

It should be relatively easy to make a jig to position the three wires used in measuring pitch diameter so that a given tube neck could be slipped in between them and measured rapidly.

It is considerably more difficult to measure a female part with the three-wire method. The only way that I know of is to make an impression of the female part and then measure the male impression. This is subject to error because of possible errors in taking the impression. Fortunately, gages for both tube necks and caps are available.

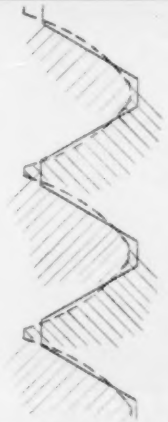
The principle of these gages is based on accurate pitch diameters, and if caps and tubes are made to fit the gages properly, it would be impossible to run into problems. Unfortunately, very little attention has been paid to pitch diameters. As a matter of practice if the major diameter of a male threaded piece seems to be right, that is about all

FIG.6



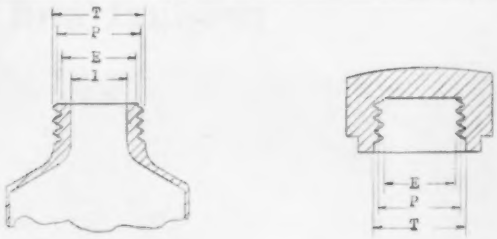
Interference because of incorrect thread angle

FIG.7



Interference due to distortion of thread form

FIG.8



TUBE NECK SIZE	I	T				E				P				T P I
	Nominal Orifice	Max. Tube	Min. Tube	Max. Cap	Min. Cap	Max. Tube	Min. Tube	Max. Cap	Min. Cap	Max. Tube	Min. Tube	Max. Cap	Min. Cap	
12	12/64	.317	.307	.337	.324	.253	.243	.273	.260	.285	.275	.305	.292	20
16	16/64	.380	.370	.400	.387	.316	.306	.336	.323	.348	.338	.368	.355	20
20	20/64	.443	.433	.463	.450	.379	.369	.399	.386	.411	.401	.431	.418	20
28	28/64	.568	.558	.588	.575	.504	.494	.524	.511	.536	.526	.556	.543	20

6. Interference because of incorrect thread angle.

7. Interference due to distortion of thread form.

8. To insure good fit and adequate working tolerances on important thread characteristics, both tube neck and closure should be within the standards set.

that is done about it.

If difficulties are encountered an attempt is made to measure the minor diameter, and that is about as far as it has gone. If more attention were paid to pitch diameters and the various ways of measuring them, many seemingly difficult problems would be eliminated.

Dependence On Pitch Diameter

In analyzing diameters, the large and small diameters of the threads have very little bearing on whether the threaded piece has a proper diameter, as can be seen from some examples. Pitch diameter is the important characteristic, and if you go back to the basic triangle that is involved, it can be easily seen that so long as its contour is followed and pitch diameter is correct, the large and small diameters could be altered quite drastically and the thread would either fit or not fit depending completely upon the pitch diameter. See Figures 3 and 4.

The next thing which is extremely important is the number of threads per inch of the pitch of the thread. In other words, the distance from one thread to the next. In the case of our Industry Standard thread, this should be exactly .050" if the thread form is correct. The thread could be correct in all other respects, but if this dimension is out, the two pieces simply will not fit. The easy way of measuring this characteristic is on a comparator taking the accumulative distance over several full turns of

(Continued on Page 44)

Here is an approach to the packaging of a multi-product line in a wide range of containers: Simoniz Company maintains a battery of complete lines, switches their production and entire crews as needed, and gives the plant manager a tight centralized control of the whole operation. This article tells how it all works and reviews some of the basic usage of equipment and techniques.

Plantwide coordination key to handling of product and package variations

Development of centralized scheduling and flexible usage of personnel and equipment enables Simoniz Company, Chicago manufacturer of waxes and polishes, to handle 95 packages for 24 products on 13 packaging lines in its Kankakee, Illinois, plant. Further, this company capitalizes on coordinated line layout as well as on the use of a series of mechanical and operational innovations. From the standpoints of different containers used, product range, and packaging line utilization, the plant faces a challenging production problem. Its solution — use of a cordinated operation — suggests a number of ideas and practices useful to any plant faced with a multi-product line.

The range of containers used and the different types of products packaged emphasize the diversity of operations which Simoniz has at this plant. Metal containers include half-pint, pint, quart, half-gallon and one-gallon F-style cans; five-, 30- and 55-gallon drums; seven and ten ounce, one and five-pound plug type cans as well as 30-pound pails. Glassware includes eight-, 16- and 32-ounce Boston round bottles, and 16- and 32-ounce blue oval bottles.

Of the 13 packaging lines, Nos. 1 through 5 are assigned to various floor wax products. These lines include can turners, multiple head rotary fillers and cappers, as well as automatic case packers and sealers.

A special feature of lines Nos. 1 and 2 is that there is a 30-foot conveyor between the capper and case packer. This space is necessary whenever a deal or promotional combination is being handled.

Using generally similar equipment, line No. 6 handles plastic bottles as well as half-pint and pint metal cans. This line packages four different packages. No. 7 handles three different products in half-pint and pint cans. No. 8 packages three different products using two sizes of glass bottles as well as metal cans.

Line No. 9 is assigned to just one product using a single size of plug type can. Nos. 10 and 11 operate as a unit, handling six products with six sizes of cans. This line packages furniture, car and floor wax in paste form.

No. 12 is a relatively short line handling eight products in four sizes of cans ranging from one-half pint to one gallon. A flexible line, it serves primarily for short runs. Line No. 13 is used entirely of hand work. No. 13 is used entirely for hand work.

An innovation of the Simoniz plant is its use of just five automatic case sealers to handle the production of all 13 lines. Seven conveyors feed cases into the five sealers. Layout is arranged so that there is about twelve minutes of detention time for each sealer. By engaging multiple conveyors, this time may be increased to 24 or 36 minutes.

Novel Operating Features

The two-part Simoniz line has a number of unusual mechanical and operational features. A close look at this line focuses attention on the company's approach to problems of equipment and methods. There is a can delivery system that makes it possible for one girl to supervise both paste fillers. Before developing this method, it was necessary to have four girls to feed both machines.

This automatic can feeder uses an air cylinder, a brake motor and a micro-switch to push a line of eight cans from the conveyor to the filler. There is a lug chain conveyor on six-inch centers, to insure cans being in position to enter the filler. The timing of the air cylinder is coordi-

nated with the cam on the filler. This cylinder itself operates a metal bar that pushes each row of eight cans into the filler. Each such filler is an eight-head, straight-line piston type.

There is a conveyor approximately 30 feet long between the can dumping point and the automatic can feeder. The same man who handles supplies of empty cans also keeps the can plug hoppers supplied with plugs.

The product being filled moves from the processing area through overhead lines to the filler. Since it is filled as a liquid and becomes more or less a solid paste by the time its container is capped, there is a critical time and temperature cycle. On some items, this must be held within two or three degrees.

As is typical of such products, it is necessary to have the material set up as soon as possible after going into the cans. At the same time the setting-up must not occur too quickly.

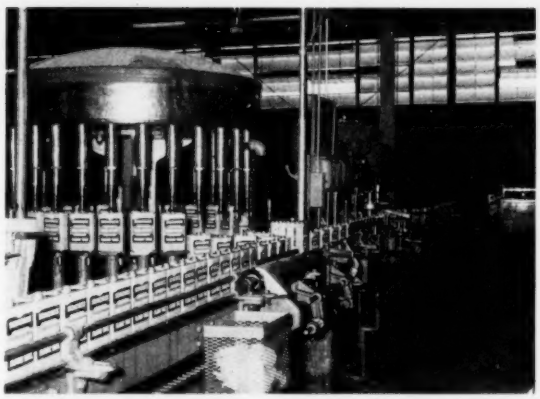
Use Of Cooling Fans

In order to control this the plant has installed a series of fans positioned in rows to blow both toward and against the direction of travel of the conveyor carrying the files of filled cans. It is necessary to have a gradual cooling in order that the finished product reaches proper consistency.

The nature of the product dictates maintaining as low as possible a level in the supply hopper serving each filler. This is necessary in order to avoid non-circulating dormant areas or spots. As a phase of its constant production improvement program, the plant is currently experimenting with a refrigerated tunnel as a substitute for the fans.

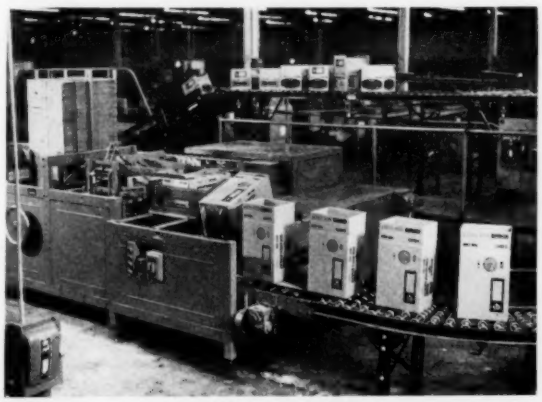
Filled cans travel on the conveyors to the two can closing stations. Here, the girls insert plugs in the cans. There are specially designed hoppers to hold supplies of plugs within easy reach of the girls. Closed cans move single file on a conveyor carrying them through the plug tightening station.

Each such tightening unit has a series of rollers slightly graduated in height above the level of cans and with their axes at right angles to the



This packaging line, one of 13 in the plant and one of five assigned to floor wax products, not only has these units of automatic machinery, but also has a 30-foot conveyor area between the capper and case packer. This area is used for assembling deals and promotional combinations.

These attendants switch from line to line as needed, in the course of scheduled plant operations. It is standard practice to train workers for a variety of jobs. Because of frequent switches they are able to keep their different skills and methods current and in practice.



From automatic case packing equipment filled cases move to the battery of case sealers. There are seven conveyors feeding five such sealers — which handle the production of all 13 lines. Floor layout provides conveyor space for twelve minutes of detention time for each sealer.

line of travel. Each roller is progressively lower, along the direction of travel. These rollers are not powered and move freely with the cans passing under them. Plugs are in tight position by the time the cans emerge from the discharge end of the roller station.

At this point the file of cans reaches a spur or junction point from which they move either to a Standard-Knapp case packer or to a manual casing operation. The choice of machine or hand casing depends on the particular scheduling at the moment.

Study Capping Methods

Although it has made many studies on the subject of automatic capping of these cans, the Simoniz Company finds manual capping advantageous. Variations of production, increased plug cost due to the necessity of stacking, loss of floor area, the necessity of machine operators, as well as the cost of the machinery itself influences the decision to retain the manual capping. Further, there is considerable flexibility in the number of girls used, depending on container size, line speed and the volume of a run.

Although there are two identical lines, the plant operates them as a single line. It is advantageous to balance the requirements of production on each in order to use these lines to complement each other. For example, the lines are equipped so that one girl can operate two fillers, one stock man can handle two lines, and one machine tender is sufficient for both.

Another feature of this type of operation is that different container sizes or different products may be run through the double line side by side. It is simply necessary to provide separate plugs in each hopper. However, such a coordinated operation requires careful planning because of varying line speeds the different products require.

Scheduling All-Important

With this kind of diversified packaging operation, careful scheduling is necessary in order to attain peak production with minimum personnel usage. This means that workers on the various lines move from one line to another as different production runs are completed. In normal operation the plant seldom has more than eight lines running at the same time. The advantage of having 13 lines is that individual workers as well as entire crews may go from one line to another.

Such movements illustrate a focal point in the scheduling process: The planning of runs so that crew members completing one operation are fully absorbed by the succeeding operation or combination. Further, it proves advantageous to run one or two lines slightly ahead of schedule. By doing this, when it becomes necessary to switch personnel to another line, there is some head start on production.

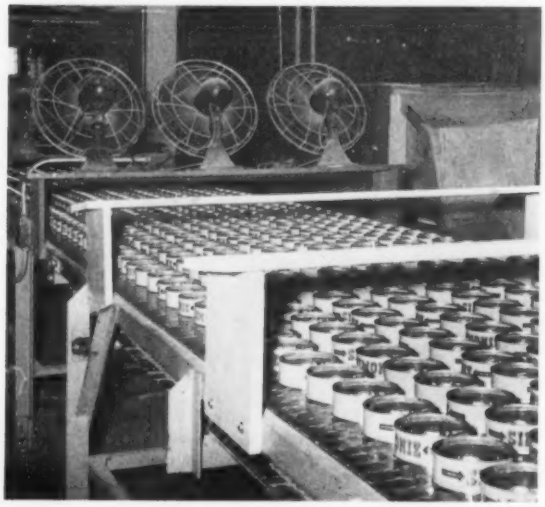
Responsibility for scheduling is centralized in the office of the plant manager. Using the customary tools and types of information, his office works out the runs.

In developing a schedule he breaks down into line requirements the production figures which management transmits to him. This enables the production clerk to determine what the line can handle during a month. From this he develops a weekly schedule based on an average. From this weekly schedule he works out the daily production schedules.

Balancing Line Requirements

Production figures are furnished to him on a monthly basis, subject to a semi-monthly revision. In working out his daily production schedules, he must consider which lines are suitable for given products, and must decide which ones can be used in combination. He also plans runs that are staggered — in order to use

Special problem of packaging a product such as Simoniz is the critical control of temperature and setting-up time. These fans facilitate gradual cooling of product to assure proper consistency. This line and the one at right comprise the two-part Simoniz line, which operates as a unit.



Manual spotting of plugs on filled cans is aided by this specially-built hopper to keep supplies of plugs within reach of girls. Number of girls used depends on container size, line speed, and the volume of a particular run. Cans at left are moving toward plug tightening unit on line.

scoring hits with "junior misses"...

PROTECTED BY RIEGEL

BETTY CROCKER'S NEW JUNIOR BAKING KIT CONTAINS 12 DIFFERENT CAKE MIXES AND FROSTINGS, EACH PACKED IN A POUCH OF RIEGEL'S LAMINATED GLASSINE, POLY-COATED

Protecting the sales-winning qualities of fine products is only one of the many functions of Riegel papers. Saving money is important, too. Riegel does it for you by creating the right combination of the most efficient packaging materials . . . and by "tailor-making" the paper to run and seal at high speeds on your machines. Tell us what you want paper to do for you. Riegel Paper Corporation, P.O. Box 170, Grand Central Sta., New York 17, N. Y.

Riegel PROTECTIVE PAPERS FOR PACKAGING

GLASSINES AND GREASEPROOFS
Plain • Waxed • Printed
Lacquer-Coated • Laminated

For more information circle No. 221 on Reader Service Card

the same personnel for succeeding runs.

A special problem in connection with personnel usage is to plan properly the operations requiring large crews. It is necessary to be sure that lines requiring maximum personnel operate consecutively rather than at the same time. Unless such lines do run consecutively, the available crew members are inadequate to man the lines.

Carrying out the idea that coordination and a full sharing of information are necessary attributes of successful scheduling, the production clerk uses information from all departments before he works out schedules. Likewise, his daily production schedules go to every department in the plant — in advance. Similarly, translating a schedule into action depends on the full cooperation of all supervisors.

Flexibility, Not Specialization

Another important phase of a flexible operation such as the Simoniz Company practices is the keeping of personnel flexibility. Line crew members do not specialize. Each machine operator must be able to operate every machine in the plant — even though a particular machine is normally assigned specifically to each operator.

Further, there are no departmental specialists. Maintenance men, for example, are not specialized. There are no electricians as such, although the plant has people fully qualified for that work. Rather, they are trained to do other jobs as well.

There is a systematic rotation from job to job, but ultimately each worker gets a permanent assignment. In spite of this, the crew members keep their experience diversified and current because of the frequent changeovers from line to line. As a result, their skills and specific abilities do not lapse into disuse.

Also, there is specific daily rotation on each packaging line. These changes take place at the discretion of supervisors and line operators. There is one supervisor for the packaging department and one line operator for each three lines, he has charge of those lines. The number of machine tenders vary as needed.

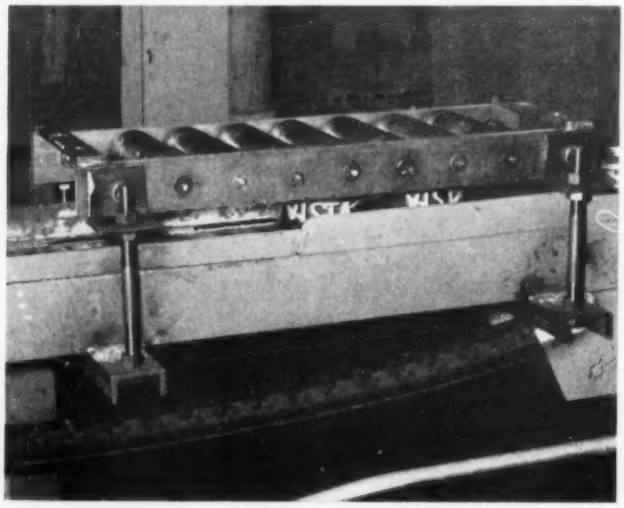
Still another phase of the Simoniz approach to flexibility is its handling of maintenance. It keeps on hand a reasonable supply of spare parts for packaging and other machinery — in line with a specific anticipation of typical or probable break-downs, based on experience.

Production Maintenance Vital

Likewise, plant workers are trained to be conscious of the urgency of maintaining production. When a line is down, the plant takes whatever immediate steps are necessary to get it back in operation. On some occasions the company sends a car and driver to another city to pick up necessary parts. At times, chartered aircraft has proved necessary. Simoniz executives take the position that the cost of such delivery and pick-up service must be weighed against the loss of production that otherwise would result. In such instances, there is no hesitancy in making such expenditures in order to avoid a loss of production, whose value would exceed the amounts spent for this emergency service.

The physical layout of the plant itself is geared to a flexible type of operation. For example, the lines are laid out so that all fillers are located as close together as possible. This contributes to improved maintenance and quality control. The general pattern of the plant operation itself focuses on a U-shaped arrangement. From one end, production flows to the packaging lines. These in turn feed the centralized battery of case sealers. This equipment then delivers its production into the adjoining warehousing area in an adjoining room — where palletizing and storage takes place.

To tighten plugs on cans there is a series of slightly graduated rollers, each one progressively lower (against cans) in direction of travel, left to right. Rollers are not powered, move freely with cans being carried on conveyor. Can plugs are tight by the time cans leave this unit.



Flexibility of plant operations demands the use of conveyor junctions, spurs and switch points. Thus, cans leaving plug tightener may move either to manual or machine case packaging stations. Cans at left are arriving from Simoniz line.

Exhibitors

THE PACKAGING MACHINERY AND MATERIALS EXPOSITION

EXHIBITOR	BOOTH	HOTEL
Abbott Plastic Machine Coporation	515	Jefferson
A-B-C Packaging Machine Corporation	759	Cleveland
A & M Tool & Die Co.	654	Cleveland
Algene Marking Equipment Co.	319	
Alpha Engineering & Machine Works, Inc.	622	Hollenden
Aluminum Co. of America	612	Cleveland
Amsco Packaging Machinery, Inc.	202-08	Auditorium
The Arabol Manufacturing Co.	554	Statler
Arenco Machine Co., Inc.	114	Cleveland
Atlantic Supply Co.	561	
Barber Colman Co., Wheelco Industries Div.	428	Cleveland
Bartelt Engineering Co.	103	Cleveland
Battle Creek Packaging Machines, Inc.	116	Cleveland
Better Packages, Inc.	527	Statler
E.L. Bivans, Inc.	406	Cleveland
Brown Bag Filling Machine Co., Inc.	413	Cleveland
Burt Machine Co.	121, 122	Cleveland
Cameron Machine Co.	112	Cleveland
Ralph Chaffee & Co.	400	Auditorium
Chain Belt Co.	653	Cleveland
Chisholm Ryder Co. of Pennsylvania	565-69	Cleveland
The Clark-Aiken Co.	315	Hollenden
Clybourn Machine Corp.	216	Cleveland
Arthur Colton Co.	426	Cleveland
Comet Industries	501	Commodore
Conapac Corp., Rotowrap Div.	212	Hollenden
Conapac Corp., Roto Bag — Holwey Div.	602	Hollenden
Consolidated Packaging Machinery Corp.	417	Cleveland
Container Equipment Corp.	302	Cleveland
Continental Can Co.	656	
Currie Packaging Co.	605	Cleveland
Dennison Manufacturing Co.	563	Cleveland
Derby Sealers, Inc.	303	Hollenden
Dixie Wax Paper Co.	751	Statler
Dobeckmun Co.	115	Carter
Doughboy Industries, Inc.	310	Cleveland
Dudley Corp.	430	Cleveland
E. I. du Pont de Nemours & Co., Inc.	409	Auditorium
Economic Machinery Co.	421	Cleveland
Electronic Machine Parts, Inc.	420	Cleveland
Elgin Manufacturing Co.	558	Cleveland
Elliott Manufacturing Co.	210	Cleveland
Eriez Manufacturing Co.	321	Cleveland
The Exact Weight Scale Co.	650	Cleveland
J.L. Ferguson Co.	110	Statler
Dave Fischbein Co.	402	Auditorium
Flow Magazine	768	
Frazier and Son	202-08	Auditorium
General Electric Co.	571	
Adolph Gottscho, Inc.	318	Cleveland
Great Lakes Box Co.	514	
Griffin-Rutgers, Inc.	502	Statler
Hansella Manufacturing Corp.	415	Auditorium
Hayssen Manufacturing Co.	215	Cleveland
H.H. Heinrich Co.	525	
Hobbs Manufacturing Co.	308	Cleveland
Hope Machine Co.	313	Cleveland
Horix Manufacturing Co.	316	Cleveland
Howard Publishing Co.	754-56	Hollenden
Hudson Sharp Machine Co.	109	Cleveland
Ideal Stencil Machine Co.	620	Auditorium
International Filling Machine Corp.	556	Hollenden
International Staple & Machine Co.	610	Cleveland
Island Equipment Corp.	512	Cleveland
Ivers-Lee Co.	305	Cleveland
R.A. Jones & Co., Inc.	425	
Kartridg-Pak Machine Co.	553	Statler
Kidder Press Co., Inc.	551	Hollenden

Continued on following page

EXHIBITOR	BOOTH	HOTEL
Kingsbury & Davis Machine Co.	201-202	Cleveland
M.D. Knowlton Co.	107	Statler
KVP Co.	651	Auditorium
Labelette Co.	719	Hollenden
Lakso Co., Inc.	411	Cleveland
Lynch Corp.	314	Cleveland
Machinery Service Co.	622	
Manhattan Paste & Glue Co., Inc.	214	Statler
Manton Brothers (America) Inc.	509	Statler
Markem Machine Co.	307	Cleveland
Marsh Stencil Machine Co.	513	Auditorium
Mercury Heat Sealing Equipment Co.	500	Statler
Miller Wrapping & Sealing Machine Co.	201-202	Cleveland
Milprint, Inc.	550	Statler
Modern Packaging	655	Statler
Monarch Marking System Co.	504	
Kenneth J. Moore & Co.	519-21	
MRM Co., Inc.	306	Cleveland
National Adhesives Div. of National Starch Products Co.	200	Statler
National Equipment Corp.	661	Statler
National Flexible Packaging Association	750	
New Jersey Electronic Co.	523	Hollenden
New Jersey Machine Corp.	406	Cleveland
Olin Film Division, Olin Mathieson Chemical Co.	Registration area	Cleveland
Package Engineering	220	Statler
Package Machinery Co.	102	Cleveland
Packaging Parade	101	Statler
Packmasters	616	Cleveland
Paisley Products, Inc.	617	Cleveland
Pak Rapid, Inc.	416	Auditorium
Palmer Supplies, Co.	301	Auditorium
Paper Converting Machine Co.	407	Cleveland
Peters Machinery Co.	221, 218	Cleveland
Pneumatic Scale Corp. Ltd.	304	Cleveland
Post Machinery Co.	113	
Potdevin Machine Co.	663, 665	Cleveland
F. B. Redington Co.	106	Cleveland
Resina Automatic Machinery Co., Inc.	721	Cleveland
Reynolds Metals Co.	309	Statler
Riegel Paper Corp.	322	Statler
Scale Specialties & Systems, Inc.	511	Statler
Scandia Manufacturing Co.	312	Cleveland
Schooler Manufacturing Co.	222	Cleveland
Simplex Packaging Machinery Co.	202	Cleveland
Southern Adhesives Corp.	518	
Standard-Knapp Div. Emhart Manufacturing Co.	422	Hollenden
Standard Packaging Corp.	111	
Stein, Hall & Co., Inc.	601	Statler
Stokes & Smith Co.	201-202	Cleveland
Swift & Co., Adhesive Products Dept.	516	Statler
C. Tennant, Sons & Co. of New York	615	
Toledo Scale Co.	613	
Trescott Co., Inc.	311	Cleveland
Triangle Package Machinery Co.	429	Cleveland
Union Paste Co.	518	Statler
United Shoe Machinery Corp.	555	Manger
U.S. Automatic Box Machinery Co., Inc.	105	Cleveland
U.S. Bottlers Machinery Co.	520	Cleveland
Vertrod Corp.	418	Cleveland
Waxed Paper Merchandising Council, Inc.	722	Hollenden
H.G. Weber & Co.	404	Cleveland
Woodman Co., Inc.	403	Cleveland
Wrap Ade Machine Co., Inc.	324	Cleveland
Wrap-King Corp.	320	Cleveland
Wright Machinery Co.	205	Cleveland

HOURS OF THE

Exposition

Tuesday, Sept. 11th: 12 noon to 6 p.m.

Wednesday, Sept. 12th: 10 a.m. to 6 p.m.

Thursday, Sept. 13th: 10 a.m. to 6 p.m.

Friday, Sept. 14th: 9 a.m. to 12 noon

These are the hotels where exhibitors are staying

AUDITORIUM
1315 E. 6th
Cherry 1-5100

CARTER
Prospect and E. 9th
Prospect 1-7200

CLEVELAND
Public Sq. and Superior
Tower 1-8000

COMMODORE
1990 Ford Drive
Garfield 1-3900

HOLLENDEN
610 Superior N.E.
Main 1-4700

JEFFERSON
1208 Chester
Cherry 1-9181

MANGER
1802 E. 13th
Tower 1-2345

STATLER
Euclid Ave. and E. 12th
Prospect 1-6800

TAKE THIS WITH YOU TO CLEVELAND

PACKAGING INSTITUTE PROGRAM

Packaging Institute is holding its 18th Annual Forum September 10-12 in Cleveland's Hotel Statler. Theme of the forum is "Dollars and sense of protective packaging".

Monday, September 10th:

10:00 a.m. President's address, by Herbert T. Holbrook, Standard Packaging Corp. Business meeting of P I and election of directors. Address by Chas. F. Honeywell, U. S. Department of Commerce.

12:15 p.m. Opening Luncheon.

1:00 p.m. Keynote address by Cola G. Parker, National Association of Manufacturers: The dollars and sense of protective packaging.

2:00 p.m. *Dynamics of protective packaging.* Basics of the dynamics of packaging, Dr. Frank C. Campins, Polymer Industries Inc., chairman; the biotics of protective packaging by Dr. John C. Bird, Lederle Laboratories; the climatics of protective packaging, by Dr. L. C. Simerl, Olin Mathieson Chemical Corp.; the mechanics of protective packaging, by Allyn C. Beardsell, Container Laboratories, Inc., and the chemicals of protective packaging, by W. E. Brown, The Dow Chemical Co.

6:00 p.m. President's reception.

6:30 p.m. Packaging Institute awards dinner, featuring the presentation of the technical operations committee award of merit; several Packaging Institute special recognition awards; and details of the Packaging Institute corporate and professional awards for outstanding contribution to packaging.

Tuesday, September 11th:

9:30 a.m. *Printed packaging seminar.* Protecting the uniformity and sales appeal of your package, E. J. Monahan, The National Biscuit Co., chairman; the advertising value of your package, by Frank Gianninoto, Package Designers Council; this is color, a film introduced by Frank W. Cray, Interchemical Corp., and a contribution to the folding box industry, by William B. Banks, The Lord Baltimore Press.

12:30 p.m. Luncheon. Protection from overtime parking, by Rex Paxton, Sutherland Paper Co.

9:30 a.m. *Drug and pharmaceutical seminar.* Dollars and sense developments in drug and pharmaceutical packaging, Carl B. Burnside, Eli Lilly and Co. chairman; flexible films and packaging materials, by Paul Geary, Smith, Kline & French Laboratories, moderator; the place of foil and film laminations in protective packaging, by George Lacy, Dobeckmun Co.; discussion of the mechanical aspects of overwraps and bundling, by Harold Mosedale Jr., Package Machinery Co.; glass . . . new uses, new manufacturing techniques, by Dr. Oscar Norris, Winthrop Laboratories, Inc., moderator; techniques and methods for the use of plastic-coated glass containers, by A. R. Marks and Edmund Budzilek, Wheaton Glass Co.; protective uses of ceramic coatings on glassware, by E. C. Manuel, Armstrong Cork Co., and research and the glass container of tomorrow, by J. W. Hackett, Owens-Illinois.

2:00 p.m. Present status of irradiation sterilization, George Schleck, Merck & Co., moderator; theory and instrumentation of irradiation, by Dr. E. J. Henley, Columbia University; the aspects and use of irradiation sterilization, by Dr. Velma L. Chandler, Ethicon, Inc.; package design as affected by electron beam sterilization, by F. L. Foster Jr., High Voltage Engineering Co.; aerosols . . . next stop, the pharmaceutical industry, Richard J. Hennessey, Lederle Laboratories, moderator; aerosols . . . principles and scope of operation, by T. D. Johnson, E. I. du Pont de Nemours & Co., Inc., and pharmaceutical aerosols from idea to product, by Morris J. Root, G. Barr & Co.

9:30 a.m. *Flexible packaging seminar.* The dollars and sense of protective flexible packaging, W. B. Tibbets, Bakelite Co., chairman. Functional properties of packaging structures, by John M. Cowan, National Flexible Packaging Association; cellulose acetate story, by D. S. Hopping, Celanese Corp. of America; foil story, by A. J. Totten, Reynolds Metals Co.; Mylar story, by W. H. Wood, the Du Pont Co.; paper story, by E. G. Penn, Riegel Paper Corp., and Pliofilm story, by Paul Beebe, The Goodyear Tire & Rubber Co., Inc.

2:00 p.m. Polyethylene and its functional properties; basic history and properties, by W. B. Tibbets, Bakelite Co.; functional coatings, by F. T. Winslow, Continental Can Co., Inc.; machine handling, by a representative of Eastman Kodak Co.; multiwall bag performance, by a representative of St. Regis Paper Co.; protection through lamination, by a representative of The Borden Co., and vacuum and gas flexible packaging, by John Rote, Standard Packaging Corp.

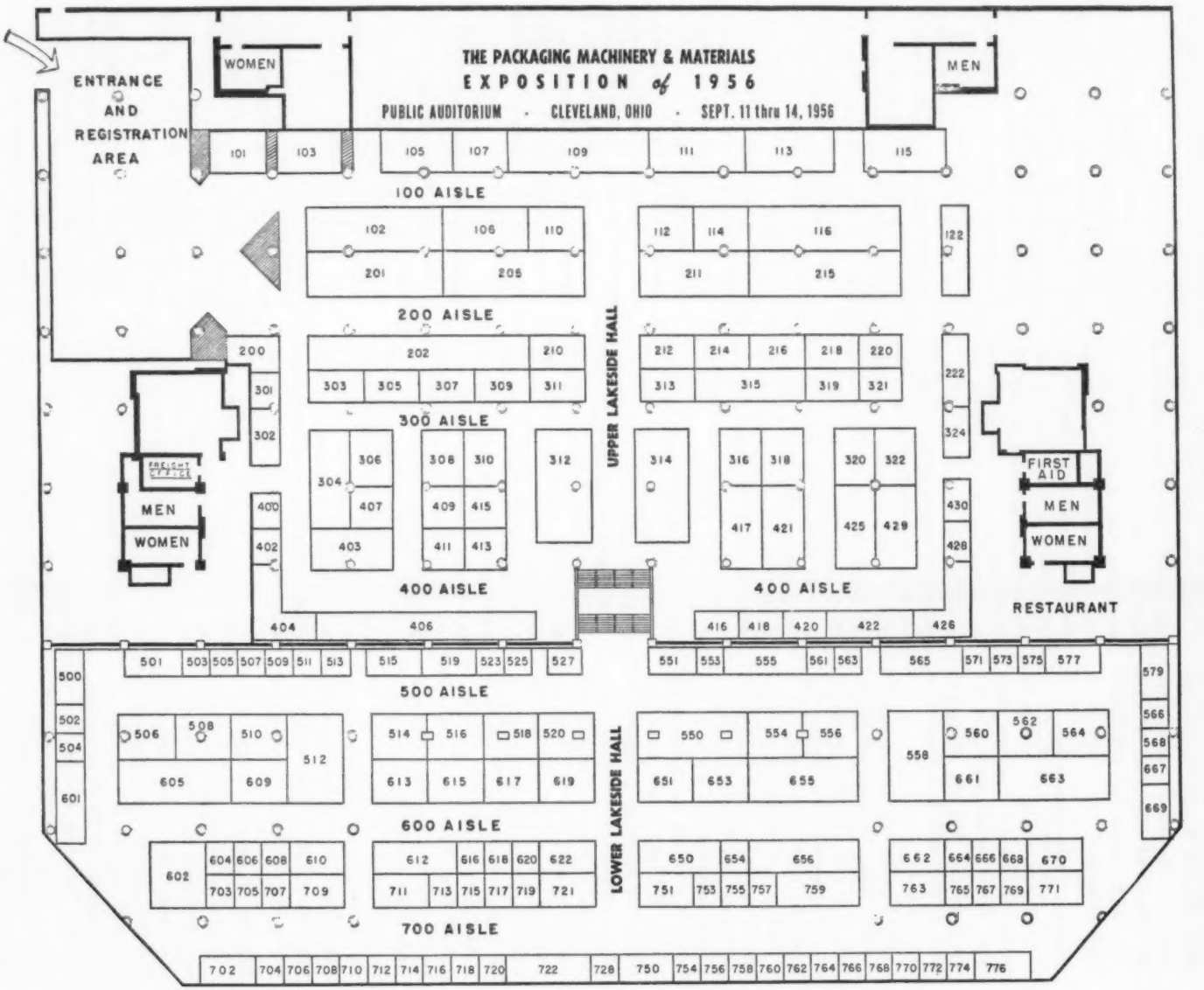
2:00 p.m. *Food packaging seminar.* Protective packaging for the armed forces, Dr. L. J. Hayhurst, Kraft Foods Co., chairman. The Quartermaster Food and Container Institute story, by Col. John D. Peterman, commandant; new horizons for simplified food logistics, by Virgil O. Wodicka; food laboratories and radiation preservation, by Capt. Reuben Pomerantz; packaging for irradiated foods by George Tripp, and food packaging for aerial delivery, by Barton Roffee. Preceding five speakers associated with the QMF&CI.

Wednesday, September 12th:

9:30 a.m. *Production line seminar.* Production line problems from the dollars and sense approach, Carr H. Parsons, Lederle Laboratories, chairman. Layout of new production lines, by Edward Wixted, Schering Corp.; protective packaging on the production line, by Frank Senger, Ortho Pharmaceutical Corp., and protection for buyer and seller in packaging machinery purchase specifications, by Wm. B. Bronander Jr., Scandia Manufacturing Co.

12:30 p.m. Luncheon. Dollars and sense of protective packaging at retail, by Charles W. Harper, Sears, Roebuck and Co.

2:00 p.m. *Packaging research and development seminar.* Charles A. Southwick Jr., Modern Packaging, chairman. A review and preview of latest developments — each subject limited to ten minutes.


THE PACKAGING MACHINERY & MATERIALS
EXPOSITION of 1956
PUBLIC AUDITORIUM · CLEVELAND, OHIO · SEPT. 11 thru 14, 1956
ENTRANCE AND REGISTRATION AREA
WOMEN
MEN
100 AISLE
200 AISLE
300 AISLE
400 AISLE
400 AISLE
500 AISLE
600 AISLE
700 AISLE
UPPER LAKESIDE HALL
LOWER LAKESIDE HALL
FREIGHT OFFICE
MEN
WOMEN
FIRST AID
MEN
WOMEN
RESTAURANT

For some time the problem of excess bulkiness caused by air entrapment during free fall was a source of difficulty to this company. Now, it has solved the problem by using a magnetic attachment in solving a flexible filling sleeve. This article reviews the innovation and enumerates details of the current filling operation.

A non-aerating filling device for 50-pound packages of dry powder

By R. N. Williams,
Chemist and Plant Superintendent, Gable-Tite Products Company, Inc., Miami, Florida

R. N. Williams is a graduate of the University of Dayton with a B.S. degree in chemistry. He has been associated with Gable-Tite for the past six years. Prior to this he was associated with Lowe Brothers Paint Company, Wright Patterson Air Force Base, and the Thresher Paint and Varnish Company. He is a member of American Chemical Society and the Federation of Paint and Varnish Production Clubs.

Our problem was how to fill a dry powder into corrugated boxes lined with a polyethylene bag, holding 50 pounds, without incorporating so much air that the package could not be immediately closed, or else would be slack filled after the air had escaped from the powder. The product is a cement-base ceramic paint for exterior use on brick, stone and stucco.

It is fairly well known that cement can be aerated to the point that it takes on the property of fluid flow, but later when the air escapes, the cement becomes a compact powder of somewhat lesser bulk-density. Because of the increase in bulk density as a result of aeration our product would more than fill the package designed to hold 50 pounds of the compact powder. Thus it would be necessary to get most of the air out of the product, when filling by allowing it to fall freely into the box, before the flaps could be sealed.

We first tried vibrating the packages to accelerate the air removal but this method was found to be ineffective. Next, we tried jogging devices but they deformed some of the boxes and weakened others to the point where this method of deaeration had to be abandoned.

The problem had arisen as a result of a repackaging program. In the past we had used cotton textile bags for packaging the dry paint, known as Kon-Kote. The product was dropped into the bags from the blender and the bags were then wire-tied. Unfortunately, a cotton bag would allow moisture to penetrate and cause a partial hydrolysis of the cement. This would cause lumps to form within six months.

A six-month shelf life is pretty short for our sort of product, hence, it was decided to package it in an air-tight, moisture-tight package which would give it an almost indefinite shelf life. It would also eliminate the

need for careful rotation of stocks of Kon-Kote in the channels of distribution, as well as the salesmen's time in watching this point, as well as the cost of replacing any lumpy paint where the goods had picked up enough moisture despite our efforts at supervising goods in inventory in the trade.

Bag In A Box

Accordingly, a printed corrugated box, six by twelve by 24 inches, was selected so that it would have dimensions approximately those of the previous cotton bag. The product was to be protected from moisture ingress by a polyethylene bag. While the new package itself fulfilled all our expectations, it immediately gave us the filling problem as previously described.

Mixing the paint in a 40-cubic foot Patterson-Kelley twin shell blender would, of course, give us a certain amount of aeration of the powder, but this entrapped air seemed to escape with sufficient rapidity during our much slower filling operation so that it did not constitute a problem. It was the 34-inch free fall of the powder from the outlet of the blender to the bottom of the package that caused the trouble.

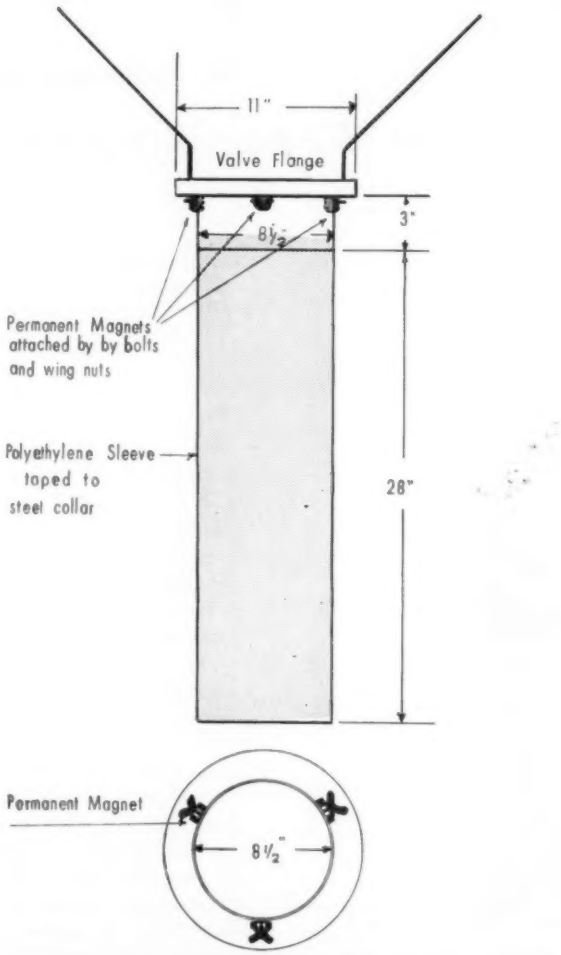
Attempts to eliminate this air by vibrating and jogging were not satisfactory, and it was decided to try bottom filling by extending the outlet chute to the bottom of the package to avoid possible aeration. The extension chosen was a flexible polyethylene sleeve or tube taped to the outlet of the blender.

But, owing to the fixed height of the large blender there was not room underneath to withdraw the sleeve from the package by merely lowering the package. Another method had to be developed which would permit removing the filled box and sleeve from under the blender to a point where the sleeve could be pulled out and reattached to the blender outlet.

Use Of Magnets

Accordingly a flanged steel collar, eight and a half by three inches, was made so that it would slip onto the outlet of the blender. The polyethylene sleeve was taped to the collar. The need for easy attachment and removal of the collar with its sleeve from the outlet precluded the use of bolts. The problem was solved by the use of Alnico permanent magnets on the collar to achieve a magnetic attachment in the manner illustrated in Figure 1. These three magnets are bolted in place and hold the collar and sleeve sufficiently tightly for our purposes, yet the assembly can be easily removed after the package has been filled.

This method of removable attachment has proved to be very satisfactory, and gives a practically dustless union. And as for elimination of aeration, the device has proved to be practically perfect. The trifling amount of air that may be entrapped during the filling of the sleeve can be removed by occasional tapping before sealing. Whenever a package appears



1. Arrangement of permanent magnets on steel collar to hold it in place while filling. Polyethylene sleeve is taped to collar.

There's a STRONG MEAD BOARD for Every Kind of Packaging

Containers made of Mead .009 Chestnut semi-chemical corrugating medium and sturdy, long-fibre Kraft liners are your best defense against the inevitable evils that stalk all goods in motion. From their own timberlands surrounding seven great board mills, Mead chooses and blends just the right pulps to give maximum strength and rigidity to board for all kinds of packaging. Available to boxmakers in a full range of trims and weights. Mead specialists are trained to adapt their products to *every* conceivable use. Our nearest office would like to discuss your needs.

HIGH HUMIDITY MEAD BOARD

New Mead High Humidity Corrugating Medium has scores of uses, retains much of its extra rigidity even at 90% relative humidity.

1. *Excellent for fruits, vegetables, meats, other foods*
2. *Extra rigidity gives containers higher compression top-to-bottom and end-to-end*
3. *Odorless; non-toxic; impairs no contents*
4. *Often replaces double-wall board*
5. *Perfect bond with other boards; fine runability*
6. *Free from foreign substances, with no waste disposal problem*

Mead Board is a standard product of

THE MEAD CORPORATION

Sold direct by MEAD BOARD SALES, INC., 3347 Madison Rd., Cincinnati 9, Ohio

CHICAGO 30, ILLINOIS . . . 6124 N. Milwaukee Avenue
NEWARK 2, NEW JERSEY . . . 10 Commerce Court
DETROIT 35, MICHIGAN . . . 18045 James Couzens Highway
BOSTON 15, MASSACHUSETTS . . . 43 Leon Street
LYNCHBURG 2, VIRGINIA . . . River Road

For more information circle No. 222 on Reader Service Card

Preferred
FOR
PRECISION
AND
PERFORMANCE
THE
ARENCO gab
TUBE FILLER

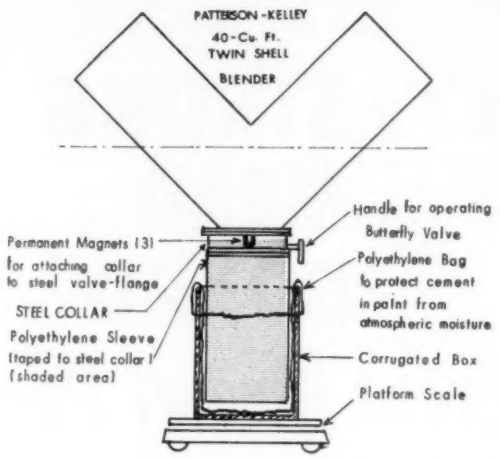
The Arenco GAB is more than a machine — it is a method — the fastest and most efficient known for high speed tube filling production.

Every hour, this Arenco GAB fills and closes up to 3,000 collapsible tubes, depending on material. It automatically positions, tightens cap, codes and discharges to conveyor line. All the operator does is load!

OTHER FEATURES INCLUDE:
Product viscosity maintained
Positively clean tubes
Quick change of product or tube size
All parts accessible for easy sterilization
Fully adjustable for volume variation
No-tube, no-fill
Adaptable to almost any type of closure

Advanced engineering and production know-how makes Arenco a truly modern filling machine — available at a practical cost. Facts that tell the complete story are yours for the asking. Write for them today!

ARENCO
MACHINE COMPANY, INCORPORATED
25 West 43rd Street • New York 36, N. Y.


PATTERSON-KELLEY
40-Cu. Ft.
TWIN SHELL
BLENDER
Handle for operating Butterfly Valve
Permanent Magnets (3) for attaching collar to steel valve-flange
Polyethylene Bag to protect cement in paint from atmospheric moisture
STEEL COLLAR
Polyethylene Sleeve (taped to steel collar) (shaded area)
Corrugated Box
Platform Scale

2. Assembly of corrugated box with polyethylene bag liner with polyethylene sleeve reaching to bottom of the box which rests on a platform scale. Filling is manually controlled.

to be overfilled, a few taps on its side causes the material to subside. The polyethylene bag liner is then twisted and tied, following which the box is glued shut.

How The Operation Works

Thus, the sequence of operations in filling Kon-Kote are as follows:

1. Insert polyethylene bag liner into corrugated box.
2. Drop the polyethylene filling sleeve into the bag in the box. (The magnetic collar is attached to the sleeve.)
3. Place box and sleeve on the packing scale under the blender.
4. Raise the magnetic collar to which the sleeve has been taped so that it attaches itself to the blender valve flange. (see figure 2)
5. Deliver the specified weight to box by manipulating the valve.
6. Detach the magnetic collar by a slight downward pull.
7. Lift box and filling sleeve off the scale onto a nearby bench or table.
8. Pull the filling sleeve upward to remove it from the powdered paint.
9. Twist and tie the polyethylene bag liner.
10. Glue the flaps of the corrugated box and seal it.

Results And Benefits

This system has been used successfully for longer than six months. Customer and dealer complaints arising from hydrolysed, lumpy paint have been eliminated. Thousands of pounds of defective material that formerly had to be replaced are no longer a problem. In the past they were due to failure of salesmen and dealers to rotate their stock. The work of handling goods in inventory in the trade has been eliminated, for it is no longer necessary to rotate the stock. And the consumer can save any unused paint by merely retieing the polyethylene liner.

The author acknowledges the valuable assistance given to him by Edwin J. King, Gaylord Container Corporation; M. Miller, plant foreman, and Clarence Arnold, Kon-Kote department, both of Gable-Tite Products Company.

Footnote

The magnets referred to in this article are horse shoe shaped, 1-13/16 inches wide, 1-9/16 inches high, and 5/8 inch thick. Each one weighs five ounces and has a nine-pound pull.

(Continued from Page 25)

This table, which serves strictly as a backlog or a reservoir, is four feet in diameter and runs at twelve r.p.m., using a one-eighth h.p. reduction gear head motor. After leaving the cartoner the completed packages move to a standard Package Machinery bundler. From here they are conveyed to the shipping room for casing.

Seven workers operate this packaging line. Its normal production is 650 gross a day. This particular line handles only the one and one-half ounce jars. Other lines handle both one and one-half and three and one-half ounce jars.

The plant finds it advantageous to operate the cartoner at 225 a minute, and at the same time, run the filling operation at 220 a minute, normally. Running the cartoner at this slightly higher speed serves to take up the slack resulting from excessive accumulation of jars all along the line. This type of operation, plus the use of the rotating tables gives Vick a stoppage-free operation. It avoids the fraction-of-a-minute stops that often are typical of this kind of packaging line operation.

Mr. McCuiston points out that it is both economical and simple to build or buy these rotating or cumulating tables. In their absence the alternative would be a series of surge points, transfer methods, or very long backlog conveyors.

Prior to installation of the present method, it was necessary to use two attendants at the filler, instead of just one. Reserve supplies of jars arrived in wood trays. These had to be stacked and emptied by hand.

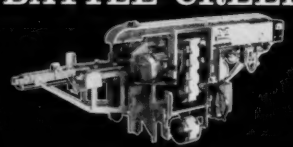
Another elimination of manual handling results from the coordinated action of a rotating table and an air cleaner. In this connection, the cleaning unit automatically feeds jars through the equipment without further handling. Further, when a cleaning unit discharges jars, the table takes them automatically.

The filling machine operator has a warning signal by which to advise the attendant unloading glass in the basement. He starts and stops his equipment to meet the needs of the filling operation upstairs.

If it's a question of

speed

BATTLE CREEK



has the answer

Illustrated is a Battle Creek Model 51, precision engineered to handle packages 3⅝ to 5¼" long (alternately 6 to 8" long), 2¾ to 4" wide and ¾ to 2" high, at speeds up to 180 per minute.

Battle Creek *Continuous Flow*® machines wrap from 60 to 180 packages a minute . . . with a choice of Cellophane, wax coated papers, foil laminations, and other self-sealing papers in economical roll form. Battle Creek's careful engineering gives you efficient, high speed performance and package handling at lowest cost, with electronically accurate registration of the printed overwrap at any speed.

LET US WRAP YOUR PRODUCT. Send us samples of your products (or if they are perishable, describe the packages and sizes) and tell us the kind of overwrapping you require. We will either wrap and return them promptly with our recommendations, or give you our best suggestions in answer to your inquiry. If you have specific questions, we would welcome a letter from you.

"Continuous Flow" Packaging

We would like to meet you at the Packaging Machinery and Materials Exposition, Sept. 11-14, Cleveland Public Auditorium, BOOTH 116.

BATTLE CREEK
packaging machines, inc.
100 TWELFTH STREET, BATTLE CREEK, MICHIGAN

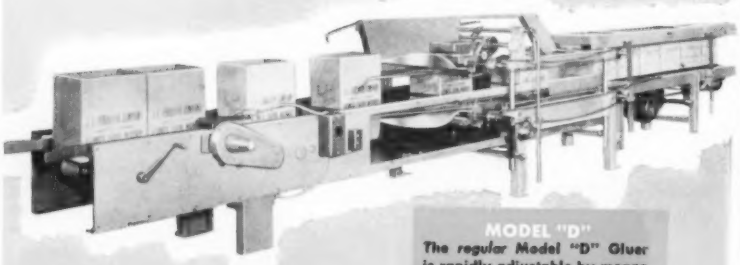
Packomatic

FULLY

AUTOMATIC

CASE SEALING

MACHINE



Write for Folder 500-37

NO OPERATOR REQUIRED

ON PACKOMATIC MODEL "D"

PICTURED ABOVE

MODEL "D"

The regular Model "D" Gluer is rapidly adjustable by means of hand cranks and threaded adjusting shafts for the following range of case sizes:

LENGTH	8" TO 24"
WIDTH	6" TO 16"
HEIGHT	3" TO 18"

Measurements taken between score lines of regular slotted containers.

NOTE: IF REQUIRED CAN BE BUILT FOR GREATER RANGE OF SHIPPING CASE SIZES

Cases are automatically aligned, flaps opened, glued, closed, sealed in compression unit—then discharged ready for shipment or storage. It is easily changed to other sizes, and is economical to operate. Construction is heavy, mechanism is simple and trouble free. The Model "D" will handle light or heavy corrugated containers or heavy solid fibre.

Special equipment available in conjunction with model "D"

1) Shipping case imprinter 2) Serial numbering device
3) Dater-coder 4) Case Counter

Packomatic PACKAGING MACHINERY

J. L. FERGUSON COMPANY

JOLIET, ILLINOIS

New York Chicago Cleveland Boston Baltimore Portland Denver
Los Angeles San Francisco Seattle New Orleans Tampa

Intricacies of screw threads for collapsible tubes

(Continued from Page 29)

thread. See Figure 5.

Consider Thread Angle

The thread angle is also quite important. See Figure 6. Threads could be correct in all respects but if the thread angle is out, the pieces will not fit. The thread angle can also be best measured on a comparator. In applying a thread to a collapsible tube, which is generally made of soft metal, it is not practical or feasible to form the thread with absolute precision.

Use Magnifying Glass

Instead of the side of the triangle being a straight line, it will usually be slightly rounded, and instead of the top and bottom flats being absolutely flat, these will be rounded or radiused — and may sometimes be slightly bulged. See Figure 7. Because these imperfections must be looked for with a very high-powered magnifying glass, our standards have been set so that there is an allowance of .007" between the diameter of the smallest cap and the largest tube neck to permit adequate clearance of the threads. See Figure 3.

Precision Limited

While on paper it should be feasible for a female piece to be screwed onto a male piece with no clearance, and this could be done with pieces made with watchmakers' precision, it just is not practical in producing collapsible tubes or plastic caps at high production rates.

Be Within Standards

In order to insure a good fit and adequate working tolerances, it is important that all the important thread characteristics mentioned above for both the tube neck and closure, be within the standards set (See Figure 8) and if they are, as mentioned at the outset, the greatest satisfaction will accrue to all concerned.

Behind today's best sellers . . . .

THE CUSTOM ENGINEERING, DEPENDABILITY AND ECONOMY OF

Packomatic

AUTOMATIC PACKAGING

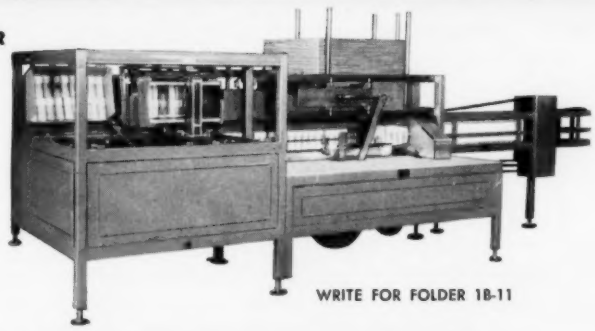
Whatever your shipping container requirements, there's a custom-engineered PACKOMATIC machine to reduce production costs and increase daily output.

For multiple loading of Simoniz liquid wax, a PACKOMATIC Automatic Case Opener and Loader — one of several PACKOMATIC machines used by Simoniz — sets up flat-corrugated cases for automatic loading. Another PACKOMATIC machine imprints lot numbers and shipping data on four sides before discharging carton to a PACKOMATIC Case Sealing machine. Fully-automatic, of course.

But regardless of your equipment budget or the degree of automation you require, there's a PACKOMATIC that can pay its way quickly in your plant. There's a machine to open cases, or load, or seal or imprint — or do any combination of these operations.

AUTOMATIC CASE OPENER AND LOADER

Depending upon the size unit to be loaded, proportion and packing arrangement of the cases, you can package 20 or more cases per minute on this machine, custom-engineered by PACKOMATIC to your needs. Multiple tier loading is used for packing such varied items as breakfast cereal, petroleum products, synthetic detergents. Phone collect, or write for literature about the advantages and economy of PACKOMATIC packaging.



WRITE FOR FOLDER 18-11

See us at Booth 110 Packaging Machinery & Materials Exposition. Headquarters — Hotel Statler

Other PACKOMATIC machines include the Bale Sealer — Case Sealers — Opener-Loaders — Case Imprinters — Telescoping Volumetric Filler — Packer-Gluers. Units available, semi-automatic or fully-automatic depending on your needs.

Over 50 years' experience in Customized Packaging Equipment

J. L. FERGUSON COMPANY Joliet, Illinois

New York, Chicago, Cleveland, Boston, Tampa, Baltimore, Portland, Denver, Los Angeles, San Francisco, Seattle, New Orleans, Louisville, Kansas City and all principal Canadian cities.

Here are some practices contributing to the effective delivery of containers to high-speed filling equipment. Those concerned with keeping fillers supplied with a range of containers may find other applications for these methods. This article not only tells how Cities Service Oil Company does all this, but also it points out some significant machine changes that are demanding even more from a can delivery system.

Keeping high-speed fillers supplied with cans

To furnish a high speed filling operation with a steady flow of empty cans, the Cicero, Illinois, compounding and blending plant of Cities Service Oil Company, operates a system of conveyors and techniques geared to function effectively with minimum manual action. This plant uses disposable and returnable containers ranging from one-quart and five-quart cans through 55-gallon drums. Some 30 per cent of its production entails one-quart cans — so a major phase of the supply system involves the handling and movement of such empty cans.

One-quart cans arrive by motor trailer from the can supplier's local manufacturing plant. Deliveries of these are scheduled so closely that their arrival may be predicted almost upon an hourly basis. Practically all other cans and containers arrive by railroad car. Because their arrival is somewhat unpredictable, it is necessary to maintain a certain flexibility in regard to the receiving system.

To handle the predictable arrival of one container and the unpredictable arrival of all others, the plant utilizes an unusual conveyor system. A double-tier powered roller conveyor runs out on the loading platform and has a junction unit that enables it to take cases or containers from both a railroad car and a motor trailer at the same time. Portable sections of skate conveyors are used to move the items from trailers and cars to the main conveyor lines.

Choice Of Levels

The packaging lines are on the main floor of the plant building. Wherever possible, containers, such as one-quart cans in reshipper corrugated boxes, move directly to a temporary storage area adjacent to the start of the packaging lines. However, the need for varying storage requirements led the plant to install a bridging or transfer system that makes possible the movement of containers from either the upper or lower main line to the storage area on any of three floors.

These storage areas are in the basement and on the top floor, as well as on the main floor. The transfer bridges are equipped with counterweights to facilitate the movement and positioning of the transfer units.

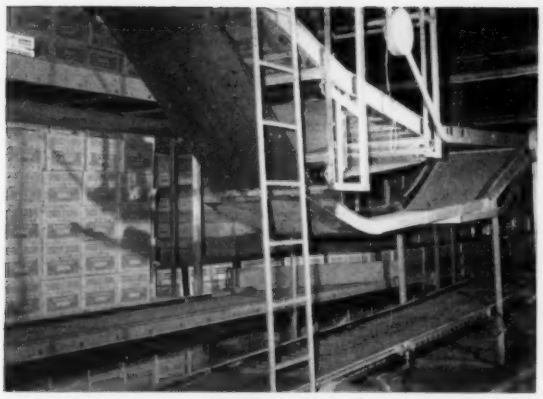
Once in the storage area adjacent to the packaging lines, reshipper boxes, containing one-quart or five-quart cans are stacked without being palletized. Plant crews find it helpful to stack fast-moving items as close as possible to the can dumping point. Because of the length of the storage area, cases are between 20 and 100 feet away from the dumping point—depending on how far back they are stacked.

Once cans go through the dumping operation, they move into a can elevator delivery, then to a cable conveyor. This is approximately 200 feet long, and thus provides a backlog of individual cans for an entire packaging line. Because it is not practicable to have surge points or backlog stations, these long conveyors are necessary.

Focal point of the entire operation is the filler for each line. This plant's high speed one-quart can line uses a Food Machinery 20-pocket piston filler. It currently runs in excess of 300 cans a minute. Speed ranges of this sort emphasize the need of an effective can movement system, and the economics of production dictate doing this with minimum manual effort.

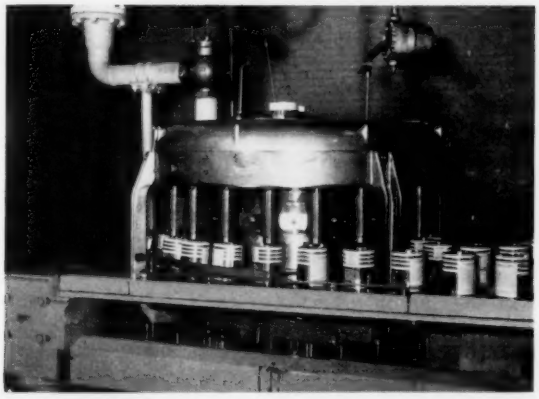
Boosting The Filler Speed

However, the plant is now developing a modification of its filler that will bring its operating speed to 500 cans a minute. Doing this will place an even greater burden on the supply system. The essence of this machine change is the *banking* of the can track around the filler. The typical angle of banking is five degrees, with a seven- to eight-degree maximum. Object of the banking is to counteract the centrifugal force which results in the spilling of oil out of cans whose movement was strictly vertical



This bridging system permits the conveying of cases to the main floor storage areas as well as to the top floor or basement. A by-pass system (as seen at rear) permits diversion of cases to conveyors branching off these main lines.

These cases (at right) are moving to a storage area. The direction-piece (in center) guides their flow. All of these conveyors receive cases from an outdoor platform. It is equipped to unload motor trailers and railroad cars at the same time.



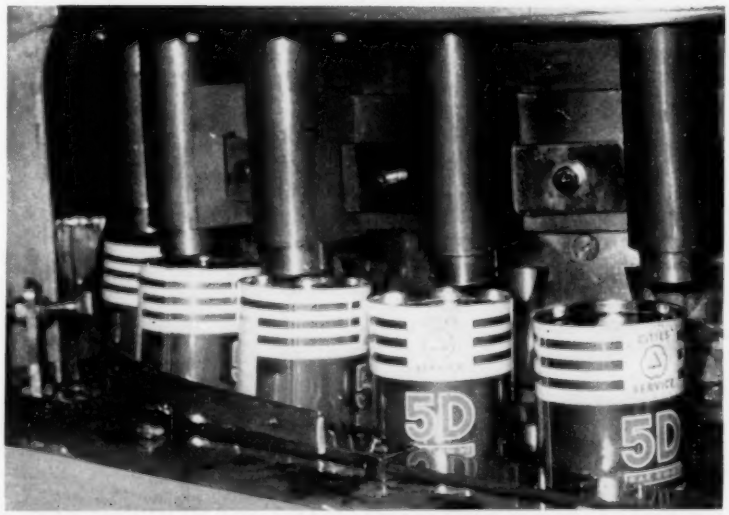
This high-speed filler emphasizes the importance of an adequate can delivery system. Although it currently operates in excess of 300 cans a minute, it is now being modified in order to run at 500 a minute. Doing this will necessitate further packaging line changes.

prior to the present machine change.

A special problem is the change of position from the banked track to the level ride. The engineers are now working out a gradual straightening action which takes place on the conveyor between a filler and can closure.

Specialists of the Cities Service, American Can, and Food Machinery & Chemical organizations are working together to make this change effective. While the change itself is relatively simple, it will necessitate a faster delivery system and a faster take-away method—all of which may cost $70,000.

Currently there is an S-shaped conveyor after the can closer and ahead of the case packing station. It provides a backlog which makes it unnecessary to slow down the filler in order to avoid getting ahead of the partially intermittent case packing operation. Similarly, the filler itself has a backlog conveyor in order to allow for can supply variations.



Focal point of stepping up machine speed is the banking of the can track around the filler. The normal angle is five degrees with a seven- to eight-degree maximum. Purpose of banking is to offset centrifugal force which made oil spill while can movement was strictly vertical.

The Packaging Machinery and Materials Exposition of 1956

Ten to fifteen thousand visitors will attend the Packaging Machinery and Materials Exposition of 1956, to be held September 11-14 in the Public Auditorium at Cleveland. More than 250 pieces of equipment, including 126 new pieces to be unveiled, will be on display, according to estimates of the Packaging Machinery Manufacturers Institute, sponsor of the exposition.

During the same week Packaging Institute will hold its 18th Annual Forum in Cleveland's Hotel Statler — September 10-12. The complete program of the forum appears on page 37 of this issue — in the pull-out guide.

"The exposition will feature action exhibits using packaging machinery and materials in operation as close as possible to the actual production," W. B. Bronander Jr., Scandia Manufacturing Company, chairman of PMMI's exposition committee declared. "As far as possible, working operations in this 'how to do it' show will leave nothing to the imagination of visitors as to how the machines operate and how materials are used."

Hours of the exposition are as follows:

Tues., Sept. 11th: 12 noon to 6 p.m.
Wed., Sept. 12th: 10 a.m. to 6 p.m.
Thurs., Sept. 13th: 10 a.m. to 6 p.m.
Fri., Sept. 14th: 9 a.m. to 12 noon

Abbott Plastic Machine Corp.
Booth: 515 **Hotel: Jefferson**
Exhibiting its equipment for the "Skin-Pack" process. This equipment will make sample packages containing combs.

A-B-C Packaging Machine Corp.
Booth: 759 **Hotel: Cleveland**
Exhibiting its short automatic top and bottom case sealer. Eight models of this equipment are available, automatic and semi-automatic — with and without heaters. Length range: From ten feet seven and one-half inches to 24 feet eleven inches, depending on length of compression unit.

A & M Tool & Die Co., Inc.
Booth: 654 **Hotel: Cleveland**
Exhibiting its Model FS-22 Saga tube filling and sealing machine. It will be filling and sealing Bracon tubes in sample sizes.

Algene Marking Equipment Co.
Booth: 319 **Hotel:**
Exhibiting its multiple printers, roller printers, continuous coders, and conveyor marker. Algene says the outstanding feature of its equipment is the speed with which markings are made on many types of surfaces.

Alpha Engineering & Machine Works, Inc.
Booth: 622 **Hotel: Hollenden**
Exhibiting its laboratory and small production air and hand can valve crimpers; crimper component parts; Alpha bottle valve roll capper; and Alpha Model A205 automatic twelve head gassing and packaging machine. The latter will be set up for automatic operation at the show.

Aluminum Co. of America
Booth: 612 **Hotel: Cleveland**
Exhibiting its Alcoa Wrap aluminum foil, aluminum closures and caps as well as aluminum collapsible tubes and thin-wall containers.

Amsco Packaging Machinery, Inc.
Booth: 202-04-06-08 **Hotel: Auditorium**
Exhibiting Model S high-speed automatic rotary sealer; Model S poly rotary sealer; high-speed jaw bag sealing and labeling machine, and equipment utilized in the Twistite/Shrinkwrap packaging method. The latter equipment uses heat shrinkable films which are non-permeable to air and moisture transmission.

Arabol Mfg. Co.
Booth: 554 **Hotel: Statler**
Exhibiting packages for which Arabol adhesives were used in sealing, wrapping and labeling by means of an automatic machine. Adhesives specialists, including a chemist, will be on hand to answer questions concerning present or prospective operations involving adhesives.

Arenco Machine Co.
Booth: 114 **Hotel: Cleveland**
Exhibiting its type GAB collapsible tube filling machine and the Capsolut sealing machine, Model A-3. Latest features of the GAB unit include a new tube holder system and a cap tightening station where the tube is not lifted. Special features of the Capsolut unit include a sealing mechanism, interchangeable from one size to another.

Barber-Colman Co.
Booth: 428 **Hotel: Cleveland**
Its Wheelco Instruments Div. is exhibiting Models 151, 152 and 297 controllers used in conjunction with heat sealing applications on various models of packaging equipment.

Bartelt Engineering Co.
Booth: 103 **Hotel: Cleveland**
Will have a "panel of experts" on hand including technical and production engineers, who will analyze packaging problems brought in by show visitors. Equipment on exhibit will include an automatic checkweigher and a Bartelt filler unit. Panel members will produce sample pouches for products brought in by visitors.

Battle Creek Packaging Machines, Inc.
Booth: 116 **Hotel: Cleveland**
Exhibiting a packaging wrapping machine in the 150 to 180 per minute speed range, equipped with an electric eye and a refrigerated discharge; a wrapper in the 75 to 85 per minute range, overwrapping packages in laminated foil, also equipped with a refrigerated discharge, and a wrapper in the 80 per minute range equipped to handle rectangular shaped packages on the narrow panel. Also exhibited will be a new flexible packaging machine to be known as the "Flexopaker."

Better Packages, Inc.
Booth: 527 **Hotel: Statler**
Exhibiting its industrial sealing machines for gummed and pressure sensitive tapes, as well as gummed tape printer-dispensers.

E. L. Bivans Inc.
Booth: 406 **Hotel: Cleveland**
Exhibiting its cartoning equipment.

Brown Bag-Filling Machine Co., Inc.
Booth: 413 **Hotel: Cleveland**
Exhibiting its Formapak machine equipped to package hardware. Running at 60 to 100 a minute, it forms a heat sealed packet from a single roll of material, and fills it in the same operation. Also exhibiting its liquid packing machine that forms and fills unit packages containing liquids, handling from two to eight packages per cycle.

Burt Machine Co.
Booth: 121, 122 **Hotel: Cleveland**
Exhibiting its Model AUS-404 labeler equipped with dual label feed, non-stop label feature and its high speed case packer.

Cameron Machine Co.
Booth: 112 **Hotel: Cleveland**
Exhibiting its Model 550 slitting and roll winding machine, designed for use in processing flexible plastic films. It is also exhibiting its Model 400 machine, designed for processing materials such as glassine, kraft paper and light weight board, among others.

Campbell Wrapper (Hudson-Sharp Machine Co.)
Booth: 109 **Hotel: Cleveland**
Exhibiting a Campbell wrapper that longitudinally seals packages with the ends crimped and heat sealed. Also exhibited will be a Campbell wrapper on which (after the longitudinal seal is made) the ends are sealed and diamond folded against the product.

Ralph Chaffee & Co.
Booth: 400 **Hotel: Auditorium**
Exhibiting its Rotor-Sealers as well as its latest developments such as an automatic in-feed, coder-dater, hole punching device and vacuumizing unit. Also exhibiting a special machine for military packaging and barrier material sealing, and a 16 mm colored movie of various installations showing production line heat sealing of bags.

Chain Belt Co.
Booth: 653 **Hotel: Cleveland**
Exhibiting its steel and nylon TableTop chain as well as its roller chains and attachments for high-speed power transmission and conveying. Also exhibiting its conveyor chain for conveying large boxes, cases and crates.

Chisholm-Ryder Co. of Pennsylvania
Booth: 565-67-69 **Hotel: Cleveland**
Exhibiting a complete packaging line including feed table, labeling machine, and casing machine. Highlighting the exhibit, according to the company, will be a wrap-around labeling machine with continuous label feed, booster spacing elevator, and with quick change features for both labels and containers.

The Clark-Aiken Co.
Booth: 315 **Hotel: Hollenden**
Exhibiting its high-speed 64-inch rotary cutter and layboy unit equipped with continuous fingers and Stevens counting and marking equipment. Also exhibiting a two-roll collapsible roll for the running with stub arbors.

Clybourn Machine Corp.
Booth: 216 **Hotel: Cleveland**
Exhibiting its CMC automatic carton filling and sealing machine, its CMC Tuc-Pac machine, and its taping machine.

Arthur Colton Co.
Booth: 426 **Hotel: Cleveland**
Exhibiting four types of filling machines, an improved multiple liquid filler, a new high-speed, two-layer tableting press, and a new granulator. Its Model 542 granulator on display for the first time, has a mechanical drive enabling selection of rotary or oscillating granulating action. The new multiple liquid production line filler also is on display for the first time.

Comet Industries
Booth: 501 **Hotel: Commodore**
Exhibiting its Mercury continuous process vacuum forming and packaging machine, using thermoplastic material fed into the machine from coil or web stock. Comet says this equipment runs at speeds from five to 20 lineal feet of package per minute.

Conapac Corp.
Booth: 212 **Hotel: Hollenden**
Exhibiting the Poly-ette machine for making bags of printed polyethylene, and using a direct application of thermostatically controlled heat for the sealing. Also exhibiting the Model B Roto-Wrap machines according to Conapac, it will feature gas packaging for the first time, involving a product containing inert gas.

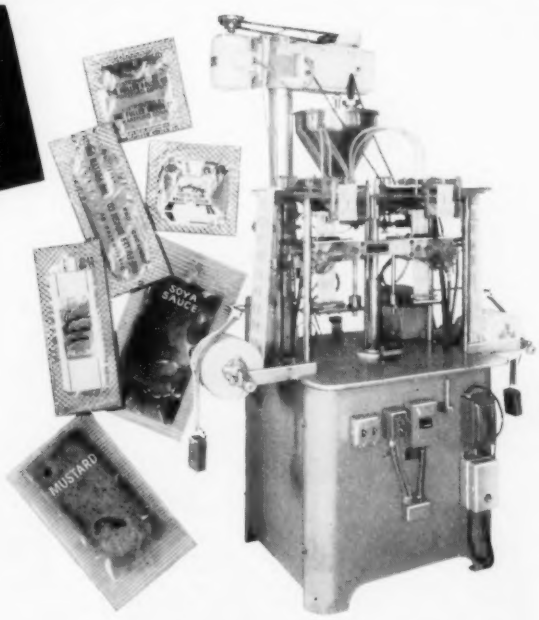
Consolidated Packaging Machinery Corp.
Booth: 417 **Hotel: Cleveland**
Exhibiting its automatic Kottoner and its Model G adjustable conveyor bag closing machine. It will also have a capping machine on exhibit. This company says the Kottoner runs at speeds up to 300 bottles a minute.

Container Equipment Corp.
Booth: 302 **Hotel: Cleveland**
Exhibiting a Model-40-9½ TT adjustable cartoner that automatically handles a reverse truck style to the top cartoner from hopper to closing allowing for hand research of the product.

Dennison Manufacturing Co.
Booth: 563 **Hotel: Cleveland**
Exhibiting its Therimage labels, which consist of strips of the labels themselves and strips of cellophane on which the labels are released. Printing is done on the coating, and when heat and pressure are applied the printed coating is released on the packaging material.

Derby Sealers, Inc.
Booth: 303 **Hotel: Hollenden**
Exhibiting its line of gummed tape dispensers and pressure sensitive tape dispensers, including two new lines of these dispensers. One is the Grip-A-Tab bag sealer for closing polyethylene bags, cod-

More and Better Packets with BROWN'S LIQUID PACKETER!



The Brown Liquid Packeter is a new and fully automatic machine that FORMS and FILLS in the same operation. Now you can fill from 2 to 8 packets per cycle at 30 to 50 cycles per minute.

Air-operated matched sealing dies provide positive sealing . . . eliminate "leakers". Easily and quickly adjusted for packet lengths from 1⅜" to 5" and up to 4" wide. An efficient packeter that requires little floor space.

Be sure to see the Brown Liquid Packeter before you buy, for Brown designing and engineering means fast, low-cost packeting with a minimum of maintenance. On display at Booth No. 413, PMMI Exposition, Sept. 11-14, Cleveland, Ohio.

- HIGH SPEED
- POSITIVE SEAL
- LOW MAINTENANCE

BROWN BAG-FILLING MACHINE CO., INC. • FITCHBURG, MASS.
"AUTOMATIC PACKAGING MACHINERY FOR MORE THAN 70 YEARS"

Day after Day...

more and more nationally famous products are packaged on the

Automatic **CAMPBELL WRAPPER**

WRAPS ALL SHAPES — Square, round, oval, oblong, flat or irregular . . . the Campbell Wrapper packages them all with equal ease and speed.

WRAPS WITHOUT BREAKAGE — Soft, crisp, hard, or fragile, the Campbell Wrapper "float" wraps the material on your product without damage.

WRAPS WITH ALL MATERIALS — Paper, cellophane, polyethylene, foils and all types of the plastic film packaging wraps so popular today.

POSITIVE SEALING — By gluing, crimping or heat sealing with ends flared, turned under or diamond folded. The Campbell Wrapper is now also available for positive VACUUM Wrapping.

AUTOMATIC FEEDS — and deliveries provide continuous flow packaging geared to coincide with in-line production manufacture or separate operation. Write for complete details and send us a sample of your product.

Speeds Production
. . . wraps up to 300 units per minute!

Cuts Labor Costs
. . . simplified one person operation!

Saves Materials
. . . uses no boards or stiffeners— *unless desired!*

See these machines at the PMMI Exposition
BOOTH 109
Public Auditorium, Cleveland
September 11th thru 14th.

Campbell
WRAPPER
HUDSON-SHARP MACHINE CO. • GREEN BAY, WIS.
Manufacturers of Aniline and Gravure Presses, Folders, Interfolders, Laminators, Waxers, Embossers, Slitters, Sheeters, Roll Winders, Packaging Machines, Crepers and Tissue Converting Units.

Write for full colored 16-page brochure telling all about the Campbell Wrappers and the many different types of products they package.

ing and sealing them in one operation. The second group of new machines concerns dispensing of pressure sensitive die-cut labels in roll form.

Dixie Wax Paper Co.
Booth: 751 **Hotel: Statler**
Exhibiting all types of flexible packages. These include wrappers of waxed glassine, wax modified sulfites, polyethylene, cellophane and acetate. Also, it will exhibit bags of various materials printed by letterpress, flexographic and rotogravure.

Dobeckmun Co.
Booth: 115 **Hotel: Carter**
Exhibiting printed and plain cellophane and polyethylene; bag and roll stock; a line of stock products, and laminated and extruded products, both filled samples and rolled stock.

Doughboy Industries, Inc.
Booth: 310 **Hotel: Cleveland**
Exhibiting its standard machines for heat sealing bag tops, with various models for closing cellophane, polyethylene and laminated bags. Also exhibiting its single and double belt conveyors which are used in connection with its heat sealing machine.

Dudley Corp.
Booth: 430 **Hotel: Cleveland**
Exhibiting motion pictures of actual installations of its automatic systems for bulk handling of empty cans received in reshipper boxes, bags and trailers. Also to be shown is an unscrambler to handle empty one pound coffee cans.

E. I. DuPont De Nemours & Co.
Booth: 409 **Hotel: Auditorium**
Its exhibit emphasizes cellophane, with various types of bags showing the versatility of this material and the machines on which it can be handled.

Economic Machinery Co.
Booth: 421 **Hotel: Cleveland**
Exhibiting its World Super C.M. labeling machine equipped to apply front and back body labels on a food glass container. Economic says this operates at a speed of 320 bottles a minute.

Electronic Machine Parts, Inc.
Booth: 420 **Hotel: Cleveland**
Exhibiting its photo-electric registration control equipment, a complete line of EMP units covering applications for intermittent or continuous rotary machines involving localization, spot cutting or synchronization.

Elgin Manufacturing Co.
Booth: 558 **Hotel: Cleveland**
Exhibiting not only its line of filling and capping machines but also its new Elgin-Wrap, in both automatic and semi-automatic models for adjustable underfolding and overwrapping and heat sealing. These machines are equipped with push button controls and safety release clutches.

Elliott Manufacturing Co.
Booth: 210 **Hotel: Cleveland**
Exhibiting a new case sealer which, according to Elliott, has one-third the

physical dimensions of current standard equipment. It is equipped and designed to be washed down or steam cleaned after each operation period.

Eriez Manufacturing Co.
Booth: 321 **Hotel: Cleveland**
Exhibiting its new HI-VI vibratory equipment unit (bin) vibrators and vibratory feeders. Eriez says these units feed and control material from ounces to tons per hour.

The Exact Weight Scale Co.
Booth: 650 **Hotel: Cleveland**
Plans to exhibit its Model 1200 automatic check weighing and models of its automatic and semi-automatic net weighing machines. It will have a line of manual scales including Shadograph models as well as heavy duty scales and weight kits.

J. L. Ferguson Co.
Booth: 110 **Hotel: Statler**
Exhibiting some of its packaging machinery.

Dave Fischbein Co.
Booth: 402 **Hotel: Auditorium**
Exhibiting its new Model C portable bag closer, which handles all paper bags including five and six ply multi-wall gusseted types, as well as textile bags, with or without asphalt lamination. There is a trigger type switch and an automatic stop, according to Fischbein.

Frazier and Son
Booth: 202-04-06-08
Hotel: Auditorium
Exhibiting its new Whiz-Packer volumetric filler with horizontal feed, along with other filling equipment. Filling speed is from ten to 80 fillings a minute, according to Frazier, who says that there is control of product headweight as well as material flow.

Adolph Gottscho, Inc.
Booth: 318 **Hotel: Cleveland**
Exhibiting its Rolacoders, Rolaprinters, Markocoder and Imagraph. These are conveyor and wrapping machine attachments for marking, code dating or imprinting of package wraps and labels.

Great Lakes Box Co.
Booth: 514 **Hotel:**
Exhibiting its Flaplox cartons running on its newly developed auto-feed mechanical carton erecting equipment; its air-operated, semi-automatic unit, and its hand-fed carton former. Also exhibiting corrugated boxes, folding cartons and set-up boxes.

Griffin-Rutgers, Inc.
Booth: 502 **Hotel: Statler**
Exhibiting its two "Codedge" label dating and coding machines.

Hayssen Manufacturing Co.
Booth: 215 **Hotel: Cleveland**
Exhibiting three of its automatic packaging and wrapping machines, including a small frame carton wrapping machine, an automatic accumulator and bundler,

Don't take chances with food wrappers

play safe with

NON-TOXIC

Patapar®

When selecting a packaging material that is to come in direct contact with food, make sure it has no impurities that might be imparted to the food. Even a faint trace of toxicity in a wrapper can cause consumer dissatisfaction.

You can have utmost confidence in NON-TOXIC Patapar Vegetable Parchment. This wet-strength, grease-resisting paper is made from pure cellulose. It contains no resins or sizings. There is nothing to impart "off" flavor.

Patapar is the perfect wrapper for protecting butter, cheese, poultry, ham, sausage, bacon, margarine, shortening, ice cream and many other foods.

Patapar is furnished in sheets or rolls, plain or colorfully printed with non-toxic inks. If you would like samples for testing, write telling us your requirements.

Send for new booklet describing special types of Patapar for industrial and business uses.

Patapar®
Vegetable Parchment
HI-WET-STRENGTH · GREASE-RESISTING

HEADQUARTERS FOR VEGETABLE PARCHMENT SINCE 1885

For more information circle No. 229 on Reader Service Card

and its Compak machine and elevator lift. These machines will be demonstrated, packaging actual products with a variety of materials.

Hobbs Manufacturing Co.
Booth: 308 **Hotel: Cleveland**
Exhibiting a montage with color transparencies of the various machines manufactured, including some specific installations. These include a variety of cutting and winding equipment including slitter and rewinder with Alquist tension control.

Hope Machine Co.
Booth: 313 **Hotel: Cleveland**
Exhibiting its type 15MS single piston semi-automatic filling machine as well as a type 19S two line, fully automatic filling machine. Hope also plans to exhibit a larger machine.

Horix Manufacturing Co.
Booth: 316 **Hotel: Cleveland**
Exhibiting for the first time its new bottom fill automatic rotary filler. Horix says the product can be introduced to the sealed filler tank under a blanket of nitrogen if desired. There is a newly designed valve for the bottom filling operation.

Ideal Stencil Machine Co.
Booth: 620 **Hotel: Auditorium**
Exhibiting its stencil cutting machines; hand and electric-operated gummed tape dispensers; an electric-operated, gummed dispenser and moistener; fountain stencil brushes, and related supplies.

International Filling Machine Corp.
Booth: 556 **Hotel: Hollenden**
Exhibiting its Series 50 rotary filling machine equipment with fluid drive. International also expects to exhibit one of its Series 64 case packers. The company says this unit automatically case out-of-round containers.

International Staple and Machine Co.
Booth: 610 **Hotel: Cleveland**
Exhibiting for the first time its new one-hand portable stapler, the Clincher. Also exhibiting its dual stapler that staples tops and bottoms of filled cartons simultaneously, and its end stapler that staples cartons from the outside.

Island Equipmentt Corp.
Booth: 512 **Hotel: Cleveland**
Exhibiting its Style-O-Vac automatic carton unloader handling up to 15 cartons a minute. Also exhibited will be a Style-O-Matic Walkie Pushie high-speed unscrambler along with its Rex Chain conveyor and its rotary accumulating table. This equipment will be operating on pint mayonnaise jars.

The Ivers-Lee Co.
Booth: 305 **Hotel: Cleveland**
Will have on hand technical specialists to discuss unit packaging generally as well as the company's contract package service, including packaging materials used for various medicinal, cosmetic and food products.

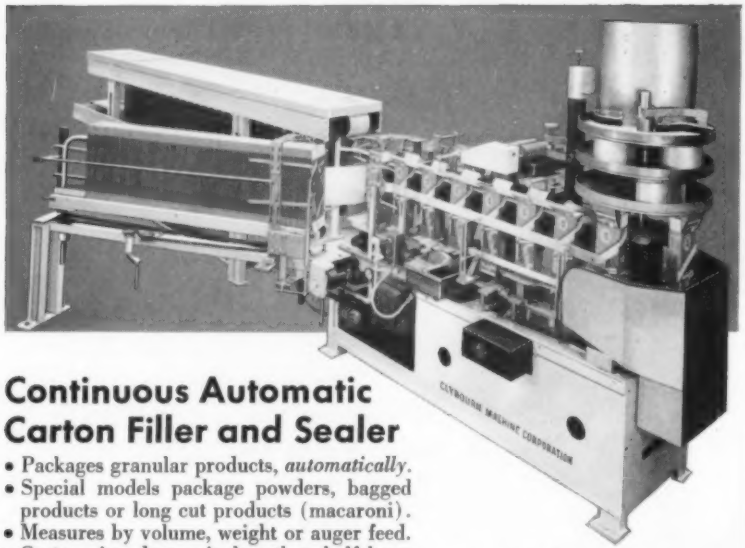
R. A. Jones & Co., Inc.
Booth: 425 **Hotel: Cleveland**
Exhibiting a constant motion cartoner model CMC 300 which operates at speeds in excess of 300 a minute, feeding each carton from magazine, opening it, tucking one end, inserting load and closing each carton. Also exhibited will be a semi-automatic constant motion vertical cartoner.

Kartridg-Pak Machine Co.
Booth: 553 **Hotel: Statler**
Exhibiting packages of food and other products packaged on its chub packaging machine. Packaging engineers will be on hand to explain the equipment in terms of various packaging problems.

Kidder Press Co., Inc.
Booth: 551 **Hotel: Hollenden**
This company, a manufacturer of printing and slitting equipment, is maintaining a booth where its representatives may meet their friends.

Kingsbury & Davis Machine Division
Booth: 201, 202 **Hotel: Cleveland**
Exhibiting its automatic corner cutters mounted on a Model LS thermoplastic quad stayer.

M. D. Knowlton Co.
Booth: 107 **Hotel: Statler**
Exhibiting its No. 77 small spiral tube winding machine and cut-off which winds spiral paper tubes from one-quarter to one and one-quarter inch diameter and



Continuous Automatic Carton Filler and Sealer

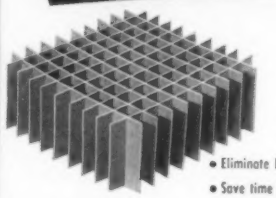
- Packages granular products, *automatically*.
- Special models package powders, bagged products or long cut products (macaroni).
- Measures by volume, weight or auger feed.
- Carton size change in less than half hour even when 3 dimensions require change.
- Automatic shakedown assures proper pack.

Uses only 14'2" by 2'2" floor space. Smooth, continuous package flow for big volume, low cost output.

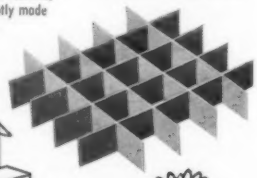
Send for Bulletin 20 or tell us what you want to package.

CMC
CLYBOURN MACHINE CORPORATION
6481 N. Avondale Ave., Chicago 31, Ill.

Wayne
PARTITIONS



- Eliminate breakage.
- Save time in packing.
- Assembled, ready for use.
- Send us your specifications, quotations promptly made on any quantity.



Manufacturers of
FOLDING BOXES
SET UP BOXES
For More Than 50 Years

WAYNE PAPER BOX & PRINTING CORP.
305 West Superior Street • Fort Wayne 2, Indiana

For more information circle No. 230 on Reader Service Card
Circle No. 231 on Card

up to five-ply thickness, and automatically cuts them into lengths from 14 to 34 inches.

The KVP Co.
Booth: 651 **Hotel: Auditorium**
Exhibiting printed waxed papers, printed foil laminated papers and plain and printed waxed paper and vegetable parchment — used on packaging machinery. KVP expects to include a large number of packages as well as papers in this exhibit.

Labellete Co.
Booth: 719 **Hotel: Hollenden**
Exhibiting its Model 11 and Model 12 Lab-L-Round labeler. These units label round containers from one and one-half pounds to one-gallon capacity, using wrap-around labeling.

The Lakso Co., Inc.
Booth: 411 **Hotel: Cleveland**
Exhibiting its new Model 52 cottoning machine, its Model 48 tablet and capsule counter, a table model sampler tablet and capsule counter, and a tablet inspection machine.

Lynch Corp.
Booth: 314 **Hotel: Cleveland**
Exhibiting its newly acquired Robo-Wrap machine in a single tube model and a standard Model T&K butter and oleomargarine packaging unit with a new vacuum feature. Lynch says the Robo-Wrap forms, fills and seals pillow style packages containing products from solids to liquids.

Manhattan Paste & Glue Co., Inc.
Booth: 214 **Hotel: Statler**
Exhibiting various packages on which the company's glue has been used. Also, it will exhibit resins and latices of particular interest in connection with packages having difficult surfaces to adhere, according to Manhattan.

Manton Brothers (America) Inc.
Booth: 509 **Hotel: Statler**
Exhibiting photographs, engineering data and drawings of the various models of Cerutti rotogravure presses and a range of accessory equipment including features such as flying splicers and folders. The company also expects to introduce its complete new line of fully automatic solvent recovery systems.

Markem Machine Co.
Booth: 307 **Hotel: Cleveland**
Exhibiting various models of its marking machines for products and packages.

Marsh Stencil Machine Co.
Booth: 513 **Hotel: Auditorium**
Exhibiting its electric Dial-Taper which delivers cut lengths of tape between three and 39 inches, as dialed. Also on exhibit will be its electric and hand operated stencil cutting machines, fountain brushes, stencil inks and shipping supplies.

Mercury Heat Sealing Equipment Co.
Booth: 500 **Hotel: Statler**
Exhibiting its Verti Pak for cellophane as well as for polyethylene. Its exhibit will also include an automatic label sealer and a Strip-O-Matic unit that does strip packaging with heat sealable materials.

Miller Wrapping & Sealing Machine Co.
Booth: 201, 202 **Hotel: Cleveland**
Exhibiting its new Simplex Model 24-7S polyethylene bag maker for making side-sealed bags without center seam; the new Corley-Miller Stor-Rap machine for wrapping trays of fresh meat, produce and the like. Also exhibiting other Corley-Miller units as well as Amsco and Whiz-Packer machines.

Milprint, Inc.
Booth: 550 **Hotel: Statler**
Exhibiting a variety of packages representative of a number of different industries. These will be on self service shelves. Shoppers in motion will show the few seconds needed to make selections, according to Milprint.

Kenneth J. Moore & Co.
Booth: 519-21 **Hotel:**
Exhibiting its Gluemaster spot coding machine for the spot coding of corrugated board and cheap board. Also exhibiting the Fischer & Krecke Model Piccolo polyethylene bag machine.

Ellisco

S·E·A·M·L·E·S·S CANS

MAKE ATTRACTIVE, ECONOMICAL PACKAGES FOR YOUR PRODUCTS

easy-to-use-ship-store

Deep Style 22. Also, Flat Style 12
Lithographed Cans for Tape and Other Products
Flat Style 10 LabelStik. Also, Deep Style 20
Screw Top Style G6
Flange Top Style G3 for hermetic sealing

Some of the many ELLISCO Seamless Cans available are shown. They are **light weight, made of one piece, unbreakable**—ideal for packaging many products, for laboratory use and for handling and storing small parts. Capacities: 1/16 oz. to 16 oz. Also many sizes and styles of seamed cans available. Write, wire or call us with your can packaging problem. Ask for Bulletin 116.

GEORGE D. ELLIS & SONS, INC.
4022 N. American St. Dept. PE-1 Phila. 40, Pa.
BAldwin 3-3405

Circle No. 232 on Card

use...

SLIPICONE

heat-stable silicone release agent

Speeds packaging and labeling—keeps films, waxes, adhesives and other packaging materials from sticking to heat-sealing equipment.

Reduces maintenance and cleaning costs—keeps equipment clean and sanitary . . . prevents pile-up, browning and ink-smear.

Available in Compound or Spray—for quick, efficient application to all types of packaging and labeling equipment. *Compound*—2 and 8 oz. tubes; 10 lb. cans. *Spray*—12 oz. aerosol bombs.

Save money with Slipicone. Write today for list of distributors.

DOW CORNING SILICONES
MIDLAND MICHIGAN

Address Dept. 5209
DOW CORNING CORPORATION
MIDLAND, MICHIGAN
ATLANTA • BOSTON • CHICAGO • CLEVELAND • DALLAS
DETROIT • LOS ANGELES • NEW YORK • WASHINGTON, D.C.
(Silver Springs, Md.)

For more information circle No. 233 on Reader Service Card

MRM Co., Inc.
Booth: 306 **Hotel: Cleveland**
Exhibiting its new rotary labeling machine that operates automatically except for feeding the machine, according to MRM, who says that it handles a wide range of label and container sizes. Also, exhibiting a fully automatic Uni-Matic labeling machine.

National Adhesives Div.
National Starch Products, Inc.
Booth: 200 **Hotel: Statler**
Exhibiting its specialty (film) laminating adhesives, high speed resyns and hot melt applications.

National Flexible Packaging Association
Booth: 750 **Hotel:**
Exhibiting packages of the various categories of winners of the 1956 National Flexible Packaging Competition.

New Jersey Electronic Co.
Booth: 523 **Hotel: Hollenden**
Exhibiting a Poly-ette bag making machine equipped with this company's photo registration control. It is also exhibiting several models of its photo registration controls and custom made machine control panels.

New Jersey Machine Corp.
Booth: 406 **Hotel: Cleveland**
Exhibiting its Pony Model 165, a fully automatic glue labeler for speeds up to 165 bottles a minute; a Pony Express fully automatic labeler for speeds up to 65 bottles a minute; a Pony Express back and front labeler that automatically applies back and front labels simultaneously at speeds up to 65 a minute; a Standard Pony Labelrite, and Model 193 quad staying machine.

Olin Film Division
Booth: Registration Area
Hotel: Cleveland
Maintaining a message center as a service to those attending the exposition. Telephone, telegraph, message board and message telephone service is available as well as a loud speaker for paging. Purpose of the booth is to receive and transmit messages of those attending the exposition.

Package Engineering
Booth: 220 **Hotel: Statler**
Angus J. Ray, publisher; R. Bruce Holmgren, editor; Laurence V. Burton, consulting editor, and Irwin F. Megargee, Eastern manager, will be in attendance.

Packmaster Sales Co.
Booth: 616 **Hotel: Cleveland**
Exhibiting its hand-fed automatic small parts packaging equipment.

Package Machinery Co.
Booth: 102 **Hotel: Cleveland**
Exhibiting its new high-speed "Versa-flow" 400 machine and a special Model B version of the original Transwrap. The chief engineers of PMC product divisions will be in attendance, along with other company personnel.

Paisley Products, Inc.
Booth: 617 **Hotel: Cleveland**
Exhibiting typical displays of gluing operations and samples of complete packages. Latest technical literature will be available. Technical application engineers and adhesive chemists will be on hand to discuss problems and adhesive requirements with visitors.

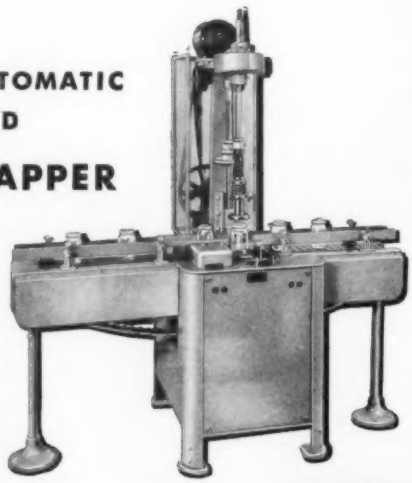
Pak-Rapid, Inc.
Booth: 416 **Hotel: Auditorium**
Exhibiting a Pak-Rapid packaging machine equipped with a semi-automatic feed, a printing unit for automatically identifying each package, and an attachment for automatically removing the air from the package as it is made. Pak-Rapid says this is a new development that combines a number of separate operations into one.

Palmer Supplies Co.
Booth: 301 **Hotel: Auditorium**
Exhibiting various products of manufacturers it represents, including desiccants from Culligan, Inc.; strippable plastics and tanks of the Western Coatings

Elgin EARNS ITS WAY

AUTOMATIC FEED

Semi-Automatic CAPPER



Whatever your packing needs, large or small, the Elgin AutomaticFeed Semi-AutomaticCapper delivers rapid, trouble-free capping with a broad range of lug and screw caps! After the operator starts the caps, an automatic timing device takes over—allowing only one container to pass into the capping station at a time. Two jaws—one stationary, one movable—hold the container while a revolving spindle lowers to tighten the cap to any desired tension. Change-over time is quick . . . just set spindle height, change chuck ring and reset timing box. The Elgin Capper handles all sizes and shapes of containers.

Write for complete literature
Address Dept. E69

PACKAGING MACHINERY MANUFACTURERS INSTITUTE PMMI MEMBER

ELGIN MANUFACTURING COMPANY
200 Brook Street, Elgin, Illinois

Compare or Verify THICKNESSES of Packaging Materials
BOXBOARD • PAPER • FOIL
FELT • PLASTICS • GLASS
Direct Reading • Extremely Accurate

Cady Exact Hand Model Micrometer Shown Designed for Portability; Other Models available . . .

- **Desk and Lab Micrometers**
- **Basis Weight Scales**
- **Bursting Strength Testers**

Write for complete catalog and price list.

E. J. Cady & Company
Manufacturers 674 N. Harlem Ave.
RIVER FOREST, ILLINOIS

Co.; polyethylene bags; drum liners and containers of the Kordite Co.; and tin cans of the Vulcan Containers, Inc., and collapsible tubes of the Standard Collapsible Tube Co.

Paper Converting Machine Co.
Booth: 407 **Hotel: Cleveland**
Exhibiting illustrations and production samples of process rubber plate printing from six-color rubber letter press equipment and six-color flexographic press; waxer; core machine; automatic rewinders; napkin machines, and a general line of paper converting equipment.

Peters Machinery Co.
Booth: 211, 218 **Hotel: Cleveland**
Exhibiting in booth 211, for the first time, its Model GT double row sandwiching machine and its Model L-2 bag sealing and header applying machine automatically closing gusset type cellophane bags. Exhibiting in booth 218 its Model SG carton and tray forming and gluing machine, its Model CCY-L carton folding and closing machine, and its new Model UD cellophane feeding and stacking machine.

Pneumatic Scale Corp. Ltd.
Booth: 304 **Hotel: Cleveland**
Exhibiting its new Pneumaclean air cleaning machine providing continuous motion, inverted air cleaning of all types of containers. Pneumatic says this unit handles round rectangular, oval and tapered containers of glass, plastic, paper, or metal, in that adjustment may be made without change parts.

Potdevin Machine Co.
Booth: 663-65 **Hotel: Cleveland**
Exhibiting its new Lock-N-Carry handle bag machine; a Model 2R12 gluing, cementing and sheet coating machine, and a Model MG four-inch margin gluer.

F. B. Redington Co.
Booth: 106 **Hotel: Cleveland**
Exhibiting a fully automatic cartoning machine as well as samples of packages handled on the various models of this company's equipment.

Resina Automatic Machinery Co., Inc.
Booth: 721 **Hotel: Cleveland**
Exhibiting its RU-200 high speed capper.

Reynolds Metals Co.
Booth: 309 **Hotel: Statler**
Exhibiting a complete assortment of gravure printed aluminum foil wraps and labels, as well as a complete line of aluminum foil containers.

Riegel Paper Corp.
Booth: 322 **Hotel: Statler**
Exhibiting specimens of its line of functional packaging papers.

Scale Specialties & Systems, Inc.
Booth: 511 **Hotel: Statler**
Exhibiting three Datamatic weight calculators, each equipped with a different scale calibrated for different test weighings. One each will be automatically averaging — in groups of four, five and ten samples. Units exhibited will have special features such as an adjusting device.

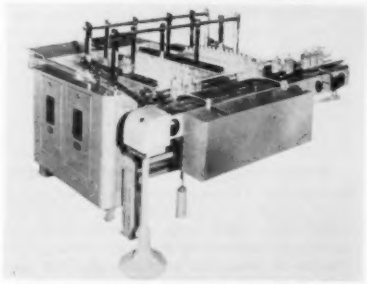
Scandia Manufacturing Co.
Booth: 312 **Hotel: Cleveland**
Exhibiting its new Model 100 fully automatic multiple wrapping, banding and bundling machine. Scandia says this is the first time that one machine performs all of these operations.

Schooler Manufacturing Co.
Booth: 222 **Hotel: Cleveland**
Exhibiting its new fully automatic adjustable wrapping machine as well as a Model J-2M semi-automatic wrapping machine which is adjustable without change parts. Its new automatic wrapper puts the longitudinal seam on the corner of the package.

Simplex Packaging Machinery Div. Food Machinery Chemical Corp.
Booth: 202 **Hotel: Cleveland**
Exhibiting its bag making and packaging machines.

Standard-Knapp Div. of Emhart Manufacturing Co.
Booth: 422 **Hotel: Hollenden**
Providing a place where visitors may sit down and relax during their tour of the show.

NEW! High Speed
WALKIE-PUSHIE
UNSCRAMBLER



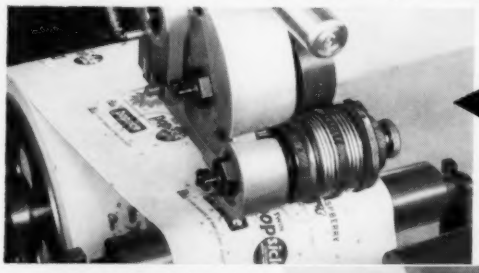
● Designed to accommodate practically any size or shape container at speeds up to 400 to 450 per minute. Bottles, jars and other containers are unscrambled *without agitation* and transfer from chain to walking beam is very gentle, without any contact of containers. Invaluable in the distillery for odd shape flasks, in the drug and cosmetic industry for unusual after-shave and hand-lotion bottles, as well as other industries wherein not only round but also unusual shapes and sizes must be handled at high speeds.

Write for detailed bulletin

ISLAND EQUIPMENT CORP.
27-01 Bridge Plaza North, Long Island City 1, N. Y.

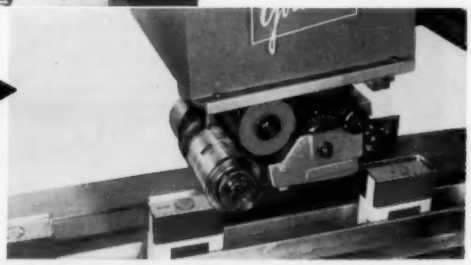
Circle No. 236 on Card

New Package-Imprinting Attachments
combine compactness and easy-installation features with precision printing performance



Model "700-A" ROLAPRINTER machine...compact wrapping machine attachment that imprints code-dates, flavors, weights, colors, brands, etc., on package wraps of cellophane, polyethylene, glassine, foil, paper. Makes accurately positioned imprint anywhere on wrap, adjusts for any cut-off length.

Model "700" ROLAPRINTER machine...imprints code-dates, lot numbers, product names, trade-marks, varieties, etc., on top surface of cartons, cases, round or rectangular cans and canisters. Attaches to conveyor or packaging machine. Locates imprints in exact desired position on containers even if container flow is irregular.



Write for descriptive Bulletin RIN-4

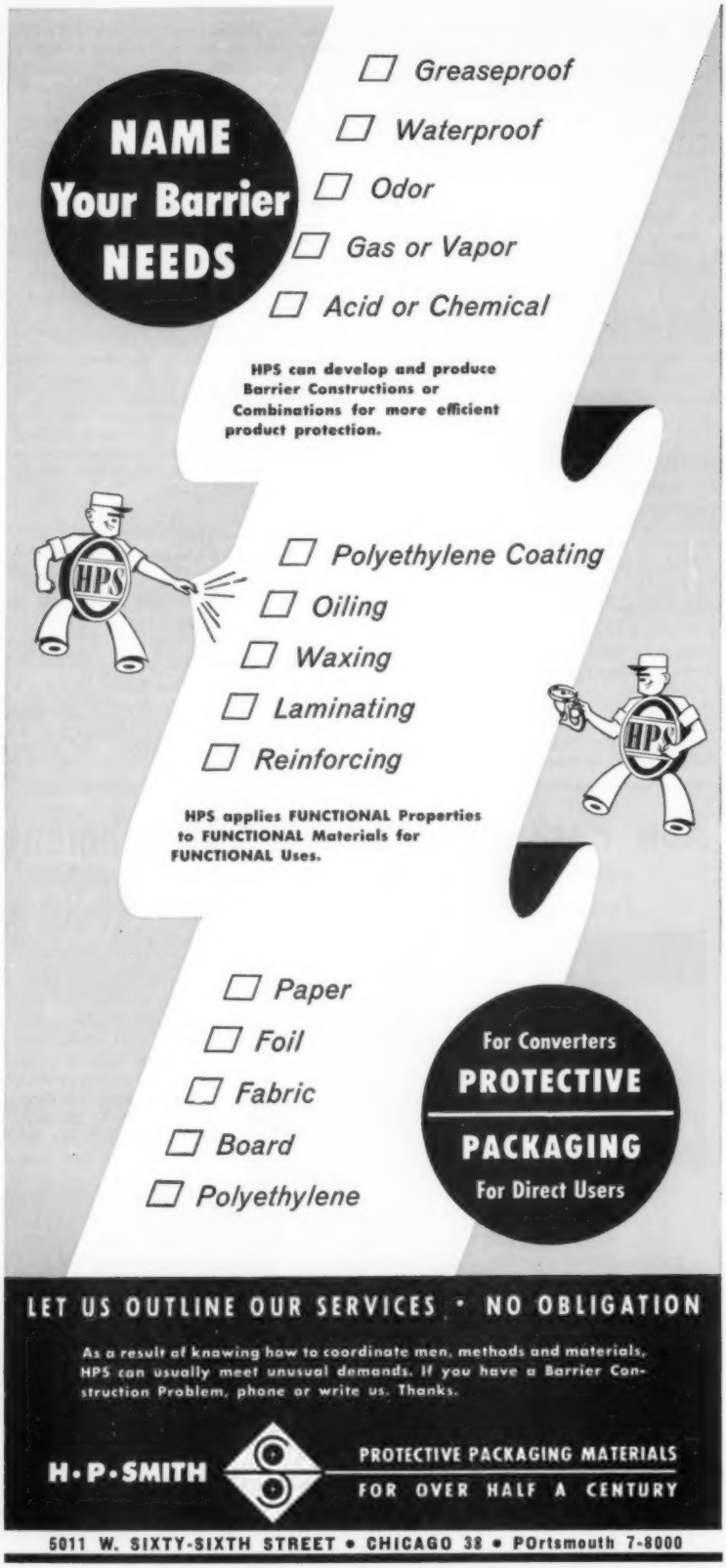
Gottscho

ADOLPH GOTTSCHO, INC.
Dept. S, Hillside 5, N. J.

In Canada: RICHARDSON AGENCIES, LTD., Toronto & Montreal

Automatic Production-Line CODING, MARKING IMPRINTING MACHINES

For more information circle No. 237 on Reader Service Card



Stein, Hall & Co., Inc.
Booth: 601, 603 **Hotel: Statler**
Exhibiting its line of adhesives for all types of packaging as well as adhesives with special properties such as resin waterproof, resin remoistening, foil laminating and barrier paper adhesives. Products and packages using Stein, Hall adhesives will be displayed.

Stokes and Smith Co.
Booth: 201, 202 **Hotel: Cleveland**
Exhibiting for the first time its new Model 601-EH high-speed carton filler and sealer, which takes folding cartons, bottom seals first and top seals then at a speed of 350 cartons or more a minute, according to Stokes and Smith. Also, exhibiting its Sure-Way package caser and SIG type CB automatic foiling machine.

Swift and Co.
Booth: 516 **Hotel: Statler**
Exhibiting numerous adhesives that have been specifically developed to meet the needs of the automated packaging industry, including new products to perform on a wide range of materials.

Toledo Scale Co.
Booth: 613 **Hotel:**

Exhibiting an automatic carton weight classifier for checking cases, cartons and materials. It has adjustable photo electric controls. Also, exhibited will be this company's large food waste disposer up to five h.p.; its new label imprinter, and representative models of its industrial weighing equipment for packaging and production operations.

The Trescott Co., Inc.
Booth 311 **Hotel: Cleveland**
Exhibiting a Trescomatic Model C, a single unit Trescomatic B, and a twin unit Trescomatic BB.

Triangle Package Machinery Co.
Booth: 429 **Hotel: Cleveland**
Exhibiting its new Elec-Tri-Flex, a fully automatic bag making and filling machine. Triangle says that it produces from 40 to 60 complete accurately weighed bags per minute. Also exhibited will be a fully automatic piston filler for packaging relatively viscous products.

United Shoe Machinery Corp.
Booth: 555 **Hotel: Manger**
Exhibiting Thermo-grip, a new adhesive that comes in cord-like form, coiled on rolls. It is used with a device that attaches to packaging and converting machines to feed, melt and apply the adhesive at the point of board formation. Also exhibited will be its Boxmaster, a machine for in-plant production of glued-up boxes from die-cut blanks.

U.S. Automatic Box Machinery Co., Inc.
Booth: 105 **Hotel: Cleveland**
Exhibiting its Crandall unit, an automatic tablet counting and filling machine, filling tablets into bottles.

Union Paste Co.
Booth: 518 **Hotel: Statler**
Exhibiting products of its customers em-

ploying the use of adhesives manufactured by Union Paste and Southern Adhesives. Emphasis will be placed on adhesives for flexible package converting, water proof paper board lamination, cellulose film and Mylar laminations and production line packaging of all types.

U.S. Bottlers Machinery Co.
Booth: 520 **Hotel: Cleveland**
Exhibiting its new Model DC-12 Sanitair high-speed rotary air cleaner. The company says this machine handles containers of one-half ounce capacity to four-inch diameter at speeds of 125 to 250 containers a minute.

Vertrod Corp.
Booth: 418 **Hotel: Cleveland**
Exhibiting its thermal impulse sealing machines of hand, foot, pedal and air-operated types in various sizes from eight to 42 inches long. Vertrod says it will demonstrate a new method for overwrapping with polyethylene, as well as the sealing of film through wrinkles, gussets, liquids and powders.

Waxed Paper Merchandising Council, Inc.
Booth: 722 **Hotel: Hollenden**
Exhibiting wrappers for bread, frozen foods, biscuits and crackers, cereal, candy, butter and other applications of waxed paper packaging.

H. G. Weber & Co., Inc.
Booth: 404 **Hotel: Cleveland**

The Woodman Co., Inc.
Booth: 403 **Hotel: Cleveland**
Exhibiting its Plur-A-Matic net weigher employing dual scales fed from a common hopper; its Air-Weigh-Matic Model 56, which opens, fills, closes, seals and delivers bags; a rotary Pak-off accumulating table, and its Klo-seal, Klo-Stitch Model 56 combination heat sealer and stapling machine.

Wrap-Ade Machine Co., Inc.
Booth: 324 **Hotel: Cleveland**
Exhibiting for the first time a new type, conveyor feed, unit packaging machine. Wrap-Ade says this machine has adjustability of package sizes without change parts and has a new type of feeding conveyor.

Wrap-King Corp.
Booth: 320 **Hotel: Cleveland**
Exhibiting its Model LF frankfurt wrapper for overwrapping one-half pound and one-pound package of frankfurts in various films, with or without a base board or tray-lock sleeve. Wrap-King says the speeds are from 30 to 80 packages per minute.

Wright Machinery Co.
Booth: 205 **Hotel: Cleveland**
Exhibiting its Bag Master system Model H, consisting of a weigher, bag applicator and bag transfer integrated and timed to operate as a unit; 2SG automatic cartoning and weighing system, and over-under check weigher which uses three weight checks.

See the New

POTDEVIN
LOCK-N-CARRY
HANDLE BAG MACHINE

on demonstration in Booths 663-665 at PMMI Show!

made and printed in one operation

Here is exciting news for the bag maker! A new bag — and a new machine — that will open new markets. Full range side-seam, this machine will produce handle bags for the notion and department store trade as well as standard notion and millinery bags, envelope flap mailing bags for magazines and square shoe bags. The fine cut-off perforations assure a *no-cut* edge. This new Potdevin Model 703 makes bags to 17" x 21" with or without the handle and patches. A multi-color flexographic press can be direct connected.

ESTABLISHED IN 1893 POTDEVIN **POTDEVIN MACHINE CO.**

221 North Street **Teterboro, N. J.**

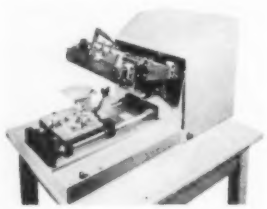
For more information circle No. 239 on Reader Service Card

Announcements of machinery and products

1. Beneath each announcement is a code number. As you select items on which you want more information, *note* this number.
2. Now, *circle* the corresponding numbers on the postcard, located inside back cover.
3. Next, *fill* in your name and address.
4. Then, *mail* the card — we pay the postage.

Screen Process Printing

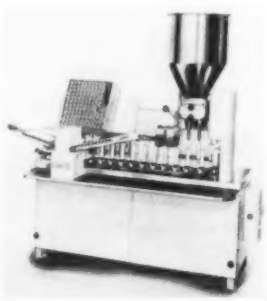
Markem Machine Co. reports development of an air-operated, electrically-controlled silk screen printing



machine. With a maximum imprint size of five and one-half by seven and one-half inches, this machine will imprint items of flat or cylindrical shape depending on the fixtures used. The manufacturer says that this equipment provides a heavy ink deposit with fine detail, such as for combination work. Circle No. 1.

Tube Filling Machine

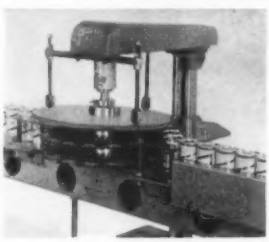
Arenco Machine Co., Inc. announces a new filling machine having a production rate of 80 to 100 tubes a



minute. Special features include blowing/suction tube cleaning, cap tightening, an air-free filling system, and photo-electric registration according to Arenco. It handles tubes up to one and one-half inches in diameter and seven and one-quarter inches long. There is a special appliance to facilitate semi-automatic tube feeding from carton to channels. Circle No. 2.

Package Imprinting Unit

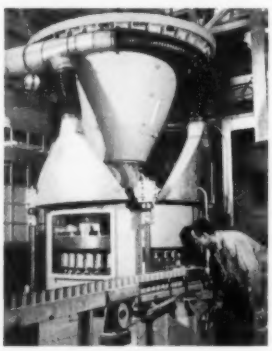
Adolph Gottscho, Inc. says that its new model TB Markocoder operates at variable speeds up to 600 impres-



sions a minute. The machine is designed to permit quick copy changes and ready adjustment by means of change parts for containers of different sizes. In operation the machine temporarily diverts the flow of cans through its imprinting section by means of a starwheel. Then it returns them imprinted to the conveyor to resume normal travel. Circle No. 3.

Automatic Filling Machine

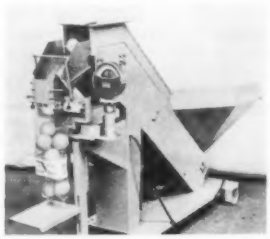
Potter & Johnston Co. announces development of an automatic filling machine capable of filling over 300



one-pound cans a minute. A special feature of this machine is that it may be changed from one can height to another (within a four and three-quarters to seven inch range) in a few seconds, according to the manufacturer. The product bin of this machine holds up to 40 cubic feet of material and has a helicoid fluffer that prevents caking or bleaching. Circle No. 4.

Automatic Bagging Machine

Food Machinery and Chemical Corp. reports that its Florida Division has a new automatic bagger consisting of



a bulk hopper, elevator, scale and weighing hoppers. There is a waterproof plastic conveyor belt which forms pockets on its upward travel for carrying items being packaged, such as fruit and vegetables. These pockets flatten out when passing over the top roll when discharging the produce. A cam-actuated bellows in the back wall of the bulk hopper pulsates continuously and prevents bridging of produce over the base of the elevator belt. Circle No. 5.

Extruded Vinyl Film

Clopay Corp. says that its new extruded vinyl film has unusual clarity and can be sealed or seamed by heat, pressure-sensitive tape, liquid adhesives or stitching machines — and holds staples without stripping or splitting. It is currently available in thicknesses ranging from three-quarter to ten mils. It is available in continuous seamless tubes from two to 54 inches wide. It resists action of

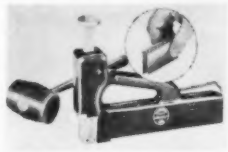
strong alkalies and acids and is moth and mildew proof according to the producer. Circle No. 6.

Automatic Code Dater

Acro Tool and Die Works says that its model 6000 automatic code dater has removable type marking units. In such a unit the numerals and letters are permanently mounted on rotating type bands, which are combined into a compact unit that can be snapped in and out. There are five type sizes ranging from 3/32 to one-half inch in height. Arco says that special spring tension device gives proper pressure for impressions on any container. Circle No. 7.

Nailing Machine

Spotnails, Inc. reports development of its new Model B Spotnailer, designed to drive one and one-half inch,



16-gauge staples into hard woods. Staples are available with rosin coating to increase holding power. The new machine is magazine fed. According to Spotnails, the staples have divergent chisel points that penetrate the hardest of woods and then spread to prevent pulling out. Circle No.8.

Pressure-Sensitive Labeling

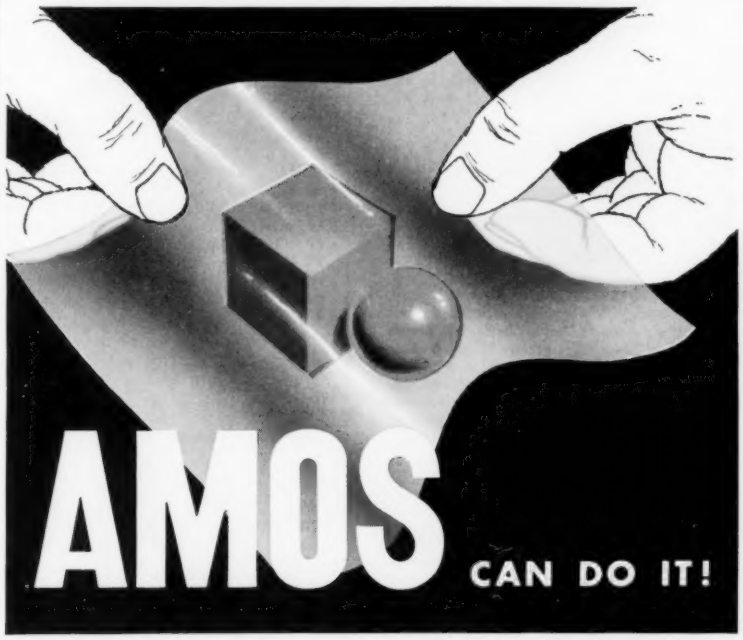
Pressure Sensitive Products Corp., announces a new pressure-sensitive label of one-piece construction. It has a hinged protective window to cover the printing or marking on the label surface — to make it moisture-proof and to keep it clean and readable. After the label goes into place, the backing paper is peeled off the hinged window, which is then positioned over the label itself. Circle No. 9.

Package Drop Tester

L.A.B. Corp. reports development of a new drop tester which permits placing the new package in the exact

position in which to have it land — on flat side, edge or corner. The package to be tested goes into place on

Polyethylene Package Development
To Meet Your Product Needs...



Whatever the *shape—size—or requirement,* AMOS makes a poly-packaging material to meet your product specifications. AMOS combines polyethylene with other films, foils, and papers as needed, for strength, resistance to temperature extremes, control of water vapor, vacuum packing or grease protection. You get a complete package development, design and laboratory testing service.

AMOS extrudes its own polyethylene—maintains quality control from start to finish. This means just *one* responsibility, from design to delivery. Take advantage of packaging experience offered by the AMOS sales engineer who calls on you . . . get his advice on polyethylene *before* your next job comes up—or write today.

YOUR NEWEST SOURCE FOR THE WHOLE JOB
—FROM PLASTIC RESIN TO PRINTED PACKAGE

Packaging Specialists—experienced staff for production, development and sales.

Extrusion, Coating, Laminating—polyethylene film and combinations with foil • "mylar" • cellophane • glassine • papers.

Complete Production—Rolls • Sheets • Bags • Pouches . . . all in one completely new plant.

6-Color Printing—latest equipment using flexographic process.

Package Design—by experienced AMOS designers.

Packaging Laboratory—testing, design and development for all flexible and rigid packaging.

Amos PACKAGING

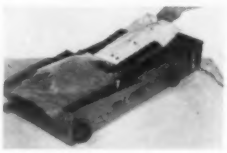
Polyethylene Film Extrusion • Coating • Laminating • Rolls • Sheets • Bags • Pouches
DIVISION OF AMOS-THOMPSON CORPORATION • EDINBURG, INDIANA

For more information circle No. 240 on Reader Service Card

a single spring-actuated arm. This moves down and away from the package at very high speed, according to the producer. The new tester handles drops from any height between twelve and 60 inches. Circle No. 10.

Bag Filling Machine

Tele-Sonic Packaging Corp. announces an all-metal package filling machine designed to handle textiles,



toys and foods. This table top unit has two guides that are specially fitted to the products being packaged. These guides lead the article into a bag which is pushed open by a blast of air and held open at the neck by means of the guides. The arm action of the attendant passes the product through the guides into the bag. Circle No. 11.

Carton for Liquids

Crown Zellerbach Corp. says that it will manufacture the Swedish-designed, pyramid-shaped Tetra Pak containers. These are made of bleached kraft coated with wax on the outside. Carton forming and filling takes place simultaneously in one machine from a single roll of stock. Unwinding from its roll the paper enters the machine as a verticle tube, is heat-sealed by a pinch at the base. After being filled with liquid, the next sealing is by another pinch — which is at right angle to the first. Circle No. 12.

Polyvinyl Acetate Emulsions

Paisley Products, Inc. announces the availability of custom polymers of vinyl acetate resin in aqueous dispersion in large quantities. These can be supplied with total solids ranging from 40 to 60 per cent. Emulsions of small particle sizes are available for heat sealability, according to Paisley, who expects that this will contribute to better penetration in paper and textile finishing. Cirle No. 13.

Remote Control Hot Plates

Miller Wrapping and Sealing Machine Co. announces a new hot plate unit that features a remote control

capillary action thermostat. Heat sealing surfaces available are five by ten inches and ten by ten inches. The equipment is designed for sealing cellophane, saran or Pliofilm. The manufacturer says the thermostat is mounted separately from the hot plate to avoid the effect of heat and vibration on its contact points. Circle No. 14.

Shipping Case Coating

National Adhesives Div. National Starch Products Inc. reports that its anti-skid Resyn 32-3415 overcomes the difficulty entailed in palletizing and stacking shipping cases having slick finishes. Spray nozzles applies a coating to the bottoms of cases as they leave the case sealer. Upon drying the coating becomes an invisible film. National says that cases treated with it may be transported and stored, and handled by automatic palletizing equipment without slipping. Circle No. 15.

Meat Packaging Unit

Standard-Knapp Div. Emhart Mfg. Co. announces its EM-129, a new machine that automatically shingles, weighs and packages bacon on boxboard. It operates in conjunction with a modified Allbright-Nell slicer. Intermittently sliced bacon falls in groups on a shingle conveyor. These groups then are carried to a point where the waxed card is automatically inserted under each one to form a package. Circle No. 16.

MODEL B-49 STRAIGHTLINE VACUUM FILLER for liquids and semi-liquids. Most automatic one-operator multiple filler. With or without discharge conveyor. Contact parts of stainless steel; plastics on special order. Adjustable for container sizes from AGST to gallon size finishes. Send for Bulletin B-49.

U. S. SIPHON FILLER. Efficient for all liquids including foamy products or products that do not permit agitation. Stainless steel tubes; acid resistant glass lined tank. Improved model. Adjustable. Write for the Siphon Bulletin.

Look to US *for Every Liquid Filling Requirement*

——whether hand-filling, siphon, semi-automatic or fully-automatic filling, there is a U. S. Filler, or an adaptation thereof, to spark your production.

Here the most unusual liquid filling problems are solved regularly by engineers with a background of generations of specialization. If your product has outgrown your present equipment, a U. S. machine engineered to your specific needs, will simplify your operations and increase your profits.

Individual Bulletins on all machines mailed upon request; please specify whether for hand-filling, siphon, semi or fully-automatic filling.

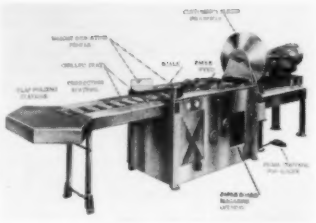
U. S. BOTTLERS MACHINERY CO.

Specialists in Liquid Filling and Container Cleaning Equipment

4009 North Rockwell Street • Chicago 18, Illinois

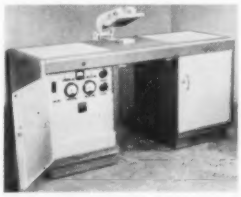
BOSTON • NEW YORK • PHILADELPHIA • SAN FRANCISCO • LOS ANGELES
PORTLAND, ORE. • DENVER • OGDEN • JACKSON, MISS. • TUCSON • ATLANTA
MONTREAL • TORONTO • VANCOUVER • WINNIPEG • TOLEDO (export).

MODEL B-2 VACUUM FILLER provides continuous production. Two containers always filling while two are placed in position. For liquids and semi-liquids. Vacuum is adjustable, and flow is regulated. Handles containers up to 4¼" dia. Fast, efficient. Send for Bulletin B-2.



Plastic Sealing Press

Erdco Engineering Corp. has a new desk type sealing press. It combines a dielectric heating generator with



a clam type press. Once plastic pieces or bubbles are in position on the desk top die or on the lower platen the operator presses two buttons, and the machine starts through a timed automatic cycle. Erdco says that variable-size press plates and dies permit the handling of seals up to twelve inches square. The press opens to allow seven inches of clear space. Circle No. 17.

Electric Batch Counter

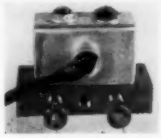
Production Instrument Co. announces a new electric batch counter that may be pre-set to count any quantity to 900 and to operate an electric switch. Its overall dimensions are approximately two and three-quarters inches wide, two and one-quarter inches deep and two and 27/64 inches high. Circle No. 18.

Bag Sealing Tape

Minnesota Mining and Mfg. Co. reports development of a glossy surface flatback paper tape designed for heavy duty bag sealing. Known as "Scotch" number 267, its tensile strength is 45 pounds per inch of width and its average adhesion measures 45 ounces at 180 degrees peel-back on the ASTM standard test. It has a thickness of 6.5 mils and a five per cent elongation before breaking. It is available in six colors. Circle No. 19.

Solenoid Control Valve

Modernair Corp. announces a new solenoid control valve measuring just four and nine-sixteenths inches long, three and five-sixteenths inches high and one and three-fourths inches wide.

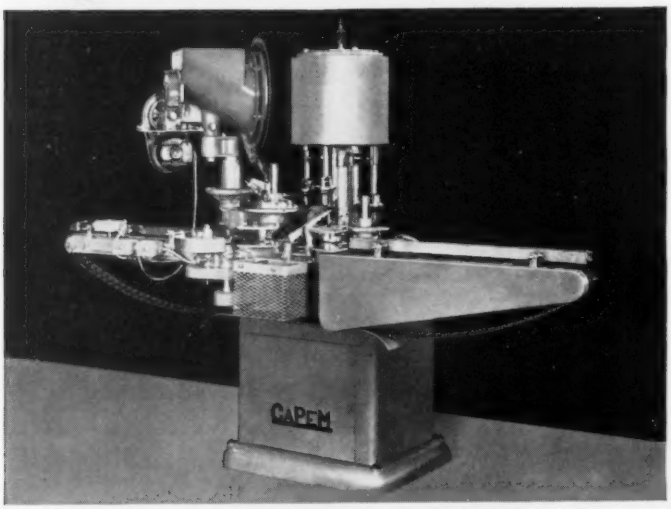


It uses a quarter-inch port size and is designed for use in oil hydraulic or air circuits operating at 50 to 150 p.s.i. Seals are standard O-rings. Modernaire says that the unit is available in three-way and four-way types. Circle No. 20.

Glass Surface Treatment

Owens-Illinois Glass Co. announces its new Duracote, a multi-purpose surface treatment for glass containers. Both a material and a process, it is a water insoluble organic polymer, applied with an engineering technique related to temperature and cooling rates. Owens-Illinois says that the treatment is durable, non-toxic permits easy labeling and can be used on all types of glass containers in the glass plant as they move from the forming line through a cooling cycle in annealing lehrs. Circle No. 21.

CAPEM THE MODERN SCREW CAPPER



- Applies any type of standard screw cap or cover at speeds of 2,000 to 10,000 per hour.
- Takes container from conveyor line, applies cap perfectly, and returns container to conveyor AUTOMATICALLY without intermediate handling.
- Handles bottles, jars, cans or jugs of any size or shape.
- Delivers a perfect, LEAKPROOF seal at low cost.
- Available in 1, 2, 4, 6 and 8 spindle models.

Write for prices and delivery

CONSOLIDATED PACKAGING MACHINERY CORP.
Buffalo 13, New York

Industry literature available free

1. Beneath each announcement is a code number. As you select items on which you want more information, *note* this number.
2. Now, *circle* the corresponding numbers on the postcard, located inside back cover.
3. Next, *fill* in your name and address.
4. Then, *mail* the card — we pay the postage.

Frozen Food Package For Cooking

Dobeckmun Co. has a product report on a laminated package (for frozen foods) designed to withstand cooking and boiling. This report enumerates package material and performance details and tells how the new package may be used. Circle No. 101.

Index Tables, Rotary Transfer Units

Ferguson Machine and Tool Co. offers Catalog 301 giving details of some 150 standard high speed index tables. This catalog not only contains specifications and engineering drawings but also has a section on how to choose a standard intermittor. Circle No. 102.

Automatic Packaging Units

Triangle Package Machinery Co. has an illustrated folder describing its automatic fillers for products such as cottage cheese. Halftones illustrate the actual machines, and line drawings reveal details of structural and functional features. Circle No. 103.

Package Sealing Equipment

Better Packages, Inc. has a set of technical bulletins covering various details of package sealing and table using operations. Illustrations include step-by-step enumerations of package closing methods, and show how to make effective use of a sealing tape. Circle No. 104.

Cutting Equipment

U. S. Engineering Co. offers a brochure on its Feed-A-Matic equipment that feeds, prints and cuts up to 200,000 items an hour. The folder includes operating details and product applications. Circle No. 105.

Power Conveyors

Harry J. Ferguson Co. offers Bulletin 302, a 24-page catalog showing 19 different types of power conveyors. Illustrations include not only close-ups of equipment but also in-plant packaging line installations. Pertinent descriptions accompany each. Circle No. 106.

Packaging Consultation

W. Scott Hassler Associates has a folder containing a chart that illustrates the relationships entailed in the packaging function. It provides a check list of a number of points to consider under such aspects of packaging as production, engineering and transportation. Circle No. 107.

Speed Control Systems

Graham Transmissions, Inc. offers Bulletin C-100 covering its automatic speed control systems. It not only describes features of units but also includes line drawings of various operating combinations. Circle No. 108.

Automatic Filling Machinery

The Filler Machine Co., Inc. has a circular describing its new processed cheese filler. Machine features and operating details are reviewed. Halftones illustrate the equipment. Circle No. 109.

Cartons and Carton Formers

Great Lakes Box Div., St. Regis Paper Co. has a catalog set describing its "Flap-Lox" cartons and its carton forming machines. Illustrated are hand, semi-automatic and automatic units. Circle No. 110.

Filling Machine Analysis

Hope Machine Co. has a six-page bulletin containing a 16 — question form. These questions are a guide to the complete analysis of a filling operation — to assist in equipment application. Circle No. 111.

Cellophane Details

American Viscose Corp. has a folder enumerating the characteristics and uses of specific types of moisture-proof, intermediate-moistureproof, and non-moistureproof cellophanes. Basic properties and suggested uses of each are enumerated. Circle No. 112.

Color Register Control

Electric Eye Equipment Co. has a twelve-page booklet reviewing details of its new Hurletron automatic proportional color register control. The booklet shows actual installations, contains detailed descriptive text and has drawings showing the operating details. Circle No. 113.

Waxed Paper Wrappers

Waxed Paper Merchandising Council has a new kit for bakers and similar package users, which includes a variety of packaging details as well as promotional aids. One section of this nine-part kit is devoted to new wrappers. Circle No. 114.

Can Machinery

E. W. Bliss Co. offers Section 2 of Catalog 36-B of its can machinery. This booklet covers strip feed press, curling units and stackers. Halftones of machines and enumerations of specifications accompany the text. Circle No. 115.

Urethane Foam

Mobay Chemical Co. has a 20-page booklet reviewing the details of its urethane foams. Not only are their properties and performance features illustrated and described but also a range of applications are included. Circle No. 116.

Variable Pulley Equipment

Lewellen Mfg. Co. announces Catalog 60-A covering its variable pulleys, adjustable bases, countershafts, adjustable pulleys and variable belts. Aside from describing details of this equipment the booklet also contains a number of pages containing engineering data on the selection of proper equipment. Charts of rating are included. Circle No. 117.

Slitter And Rewinder

Hobbs Mfg. Co. has a four-page folder describing its model MD slitter and rewinder. Halftones illustrate typical installations. Basic machine features and specifications are detailed. Circle No. 118.

Interior Packaging

Kimberly-Clark Corp has a twelve-

page booklet describing and illustrating the uses and applications of its "Kimpak". Halftones and descriptive text explain use of a number of specific applications. Specifications and properties are included. Circle No. 119.

Plastics Closures

The Poly-Seal Corp. has a folder on its closure which incorporates a plastic screw cap and polyethylene cone liner. Explanatory drawings illustrates its details, accompanying the descriptive text. Applications also are shown. Circle No. 120.

Label Papers

Nashua Corp. has a folder describing its adhesive labels, and adhesive papers. It describes product properties and includes a printed specimen. Circle No. 121.

Automatic Packaging Machinery

Hayssen Mfg. Co. has a folder describing its automatic net weight scales with a triple vibrator feed. Illustrations and descriptive text show how the equipment works. Products packaged are also illustrated. Circle No. 122.

Aluminum Foil Containers

Ekco-Foil Container Div. Ekco Products Co. announces Catalog D, illustrating and describing its line of aluminum foil containers. Tables of specifications are included. Line drawings augment the description of structural details. Closure machinery is also reviewed. Circle No. 123.

Cutter-Creaser Equipment

Champlain Co. announces a 44-page book describing its roll-feed cutter-creaser equipment and including details operating instructions. Design and operation of individual components are presented, along with such information as preparing the die, stripping template and set-up of automatic stripping mechanism. Typical die layouts and examples of properly cut and creased cartons are illustrated. Circle No. 124.

Meat Wrapper

Wrap-King Corp. gives specifications for Model "M" wrapper in an illustrated data sheet. Machine wraps sliced luncheon meats and cold cuts — round, square or loaf shapes — at speeds from 30 to 80 packages a minute, using heat sealing materials. Circle No. 125.

"Pin-hole" Free Liners

Plax Corp. says in its literature that "D.L. Layflat Tubing" precludes the possibility of pin-holes occurring in carton, drum and bag liners, in current promotion sheet. Circle No. 126.

Carton Prebreaking Gluer

Post Machinery Company's illustrated brochure gives operating details about "Model 50" 180 degree prebreaking gluer. A high speed machine, it takes die cut and scored carton blanks, and prebreaks and glues them ready for the packaging line. Circle No. 127.

Dry Products Filler

Frazier & Son has a data sheet giving details about a high speed, dry products rotary filling machine. It fills free-flowing items such as nut meats, crystals, pellets, bird seed, etc. at speeds up to 300 a minute. Circle No. 128.

Capping Machines

Consolidated Packaging Machinery Corp. provides pictures and specifications for eight models of jar and bottle cappers, in a folder. Speeds for these machines range from 40 to 200 a minute. Circle No. 129.

Heavy Duty Sealer

Wrap-Ade Machine Co., Inc. submits an information sheet about its pneumatic heat sealer for heavy packaging materials or controlled laboratory sealing. It features heavy jaw pressures up to 1,187 lbs. Circle No. 130.

Auger Filler

Stokes & Smith Co. Bulletin P-802

See us in Cleveland . . .

PACKAGING MACHINERY MANUFACTURERS INSTITUTE
PMMI

THE PACKAGING MACHINERY & MATERIALS EXPOSITION of 1956

September 11 thru 14

Cleveland Public Auditorium · Cleveland, Ohio

See in operation — complete CRCO New Way container handling line, highlighting the most versatile labeling machine available, with Continuous label feed — quick change for right or left hand lap labels — booster feed elevator — for cans, glass or aerosol containers.

LABELING MACHINES

CASING MACHINES

FEED TABLES

The Best IN LABELING AND PACKAGING Equipment

Chisholm-Ryder
COMPANY OF PENNSYLVANIA
HANOVER, PENNSYLVANIA

Write for catalogue PE-1589

lists operating details, specifications and floor plans for this company's Universal Auger Filler. This machine can fill up to 30 cans, jars, boxes or bags per minute, with from two grams to ten pounds of material. Circle No. 131.

Bag Closing Machine

Shellmar-Betner Div. Continental Can Co. has issued an informative booklet about the Benco bag closing machine which automatically closes paper bags for coffee, rice, sugar, et al, with a glue seal or steel tie at speeds of 32 a minute. Circle No. 132.

Short Case Sealer

Packaging Div. of National Equipment Corp. submits a data sheet about two models of its short case sealer. This machine has a patented fully enclosed glue valve applicator and handles cases eight to 30 inches long, six to 18 inches wide and four to 18 inches high. Circle No. 133.

Film Tube Packager

Mercury Heat Sealing Equipment Co. explains the operation of the "Verti-Pak" machine in a bulletin. It automatically forms a bag from heat sealing roll stock, fills and seals it. This unit handles hardware, toys, textiles, candy, drugs, produce, etc., at speeds of 30 to 50 packages a minute. Circle No. 134.

Vial And Bottle Sealer

Aluminum Co. of America has a four-page brochure describing the AK Sealing Machine which applies aluminum seals to vials and bottles at speeds up to 125 bottles per minute. Seals applied include Stericaps, Goldy, Overseal, RO and Pilferproof. Circle No. 135.

Pneumatic Case Sealer

Schroeder Machines Corp. lists specifications and operating details of its Model 353 case sealer in a data sheet. Machine features air pressure sealing without belts or drives, handling approximately 360 cases per hour per unit. Circle No. 136.

Spot Labelers

Economic Machinery Co. Bulletin BL-255 provides operating details for company's World Bee-Line Labeler. This machine can simultaneously apply two or more labels on cylindrical and odd-shaped containers in a straight-line operation. Circle No. 137.

Rigid Plastic Bags

The Dow Chemical Co. has a 44-page catalog describing and illustrating some 160 rigid plastic bags available. Accompanying the description of each are the name and address of the molder as well as the dimensions colors and suggested uses. Circle No. 138.

Government Barrier Materials

Cotswold Fibres, Inc. has a catalog of specification barrier materials. Actual samples are included. Descriptive material accompanies the specimen. Pertinent information from the military also is included. Circle No. 139.

Cellulose Wadding

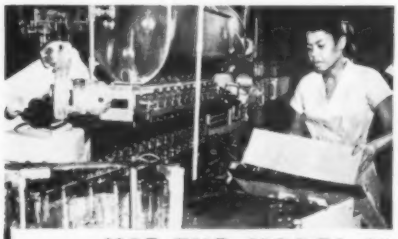
Cel-Fibe Div., Personal Products Corp. offers two folders describing its materials and outlining their applications. One of the folders emphasizes the use of these material in military packaging. Included in both are descriptive data and illustrations showing applications. Circle No. 140.

Lubrication Details

Bijur Lubricating Corp. has a service instruction sheet covering its large one-shot lubricator. It includes detail service instructions and operating information on high capacity spring discharge piston pump lubricator. Circle No. 141.

Bagging Scale Equipment

Richardson Scale Co. announces bulletin No. 6401, a two-page, two-color leaflet describing its Weighblender. Line drawings accompany the specifications and descriptive data covering this equipment used for such products as the ingredients of dry mix concrete. Circle No. 142.



A complete Filler Machine Co. line at Brook-Maid Co., Inc., Brooklyn including unscrambler, cleaner and straight line filler filling jams, jellies and preserves.

USE THE MODEL SL-55

To Fill Semi-Liquids, Semi-Solids

You'll get *more accurate filling, quicker cleaning, faster change over* when you use a Filler Model SL-55 piston type automatic filler!

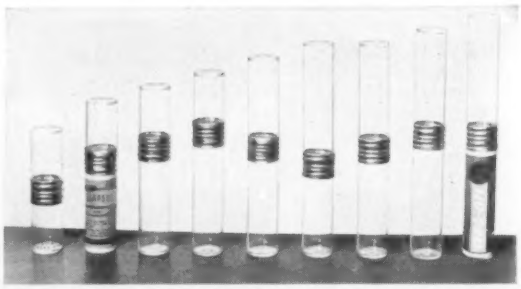
- they handle from 2 oz. to quart and 2 lb. containers, fill food, dairy, paint and chemical products.
- positive accurate filling is assured every time because valves are air-free and pallets are air operated
- a "no container, no fill" feature saves the product from being wasted and keeps the machine clean
- you get faster, easier cleaning since the valve mechanism can be dismantled quickly
- all contact parts and parts around the filling zone are 18-8 stainless steel
- speed of fill is from 60 to 300 containers per minute, depending upon size of machine.

Get further details today on this model or our other models of filling machines and let us bid on your job.

The **FILLER MACHINE CO., INC.**

the original builder of Philadelphia piston fillers

12 Penn Avenue, Rockledge, Philadelphia 11, Penna.



NEW LERMER PLASTIC COUPL-VIALS COMBINE SIZE FLEXIBILITY WITH PACKAGING BEAUTY AND UTILITY In Color Combinations

. . . can be used to package one or two different or related products in one long container!

LERMER'S new PLASTIC COUPL-VIALS are supplied in threaded cap and body sections joined by an aluminum coupling. Difficult-to-package products are packaged with ease, with beauty and utility. Sizes can be varied to your needs . . . 1" x 4" to 1" x 8" vials are available from stock . . . plus many more sizes on special order. By inserting a separator in the aluminum coupling, one or two different or related products can be packaged in the same vial. *Write for complete details.*

LERMER PLASTICS, INC. 540 South Ave. Garwood, N. J.

REPRESENTATIVES IN THESE CITIES: Rochester, Memphis, Miami, Cincinnati, Columbus, Cleveland, Chicago, Detroit, Minneapolis, San Francisco, Los Angeles, Toronto.

PIONEERS AND SPECIALISTS IN PLASTIC CONTAINERS

Non-Stick Facing

The Connecticut Hard Rubber Co. offers a brochure describing the use of Temp-R-Tape a pressure-sensitive teflon tape used as a non-stick facing to eliminate sticking problems and the like in packaging operations. Half tones illustrate its use and specifications are enumerated. Circle No. 143.

Precision Weighing Equipment

Codie-Kay Co., Inc. has a folder describing its Convey O Matic equipment for precision weighing on packaging lines. Explanatory drawings accompany the text describing the general operation of the system. Circle No. 144.

Machine Drive Equipment

Ferguson Machine and Tool Co. offers a four-page illustrated folder describing its high-speed indexing equipment. Line drawings and half tones illustrate its uses and applications. Standard units are enumerated. Circle No. 145.

Ion Exchange Films

National Aluminate Corp., Ion Exchange Div. has samples and technical literature describing its Nalfilm synthetic resin films. According to National Aluminate, these films appear to have utility beyond their original conception as permselective ion exchange membranes. Circle No. 146.

Rubber Tapes And Belts

General Rubber Corp. has an illustrated leaflet describing its press, feeder and delivery belts, as well as its power transmission belts. Specifications are reviewed and halftones illustrate installations. Circle No. 147.

Heat-Sealable Polyester Film

Minnesota Mining and Mfg. Co. has a folder describing its new Scotchpak heat-sealable polyester film. The booklet enumerates ideas for solving difficult packaging and shipping problems, according to Minnesota Mining. Circle No. 148.

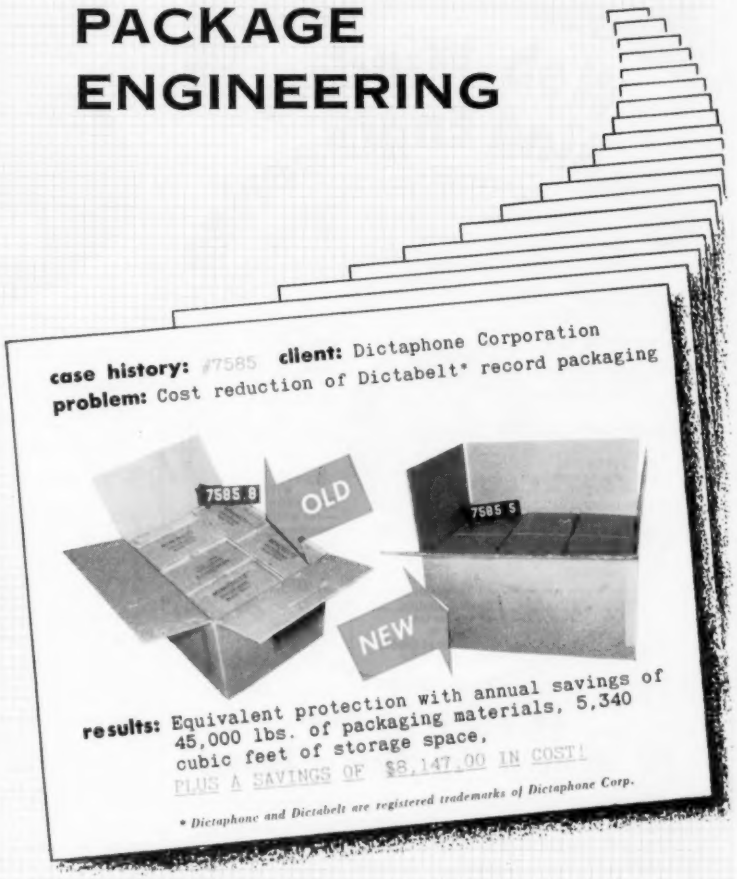
Cargo Dividers

Cargo Stabilizing Devices has a brochure describing its Load-Holder cargo dividers for holding packages, cases and unitized loads intact during movement while in transit. Line drawings illustrate the principles and techniques involved. Circle No. 149.

Be sure to take to Cleveland with you our handy, pull-out guide to the Packaging Machinery and Materials Exposition and the Packaging Institute Forum.

This is

PACKAGE ENGINEERING


case history: #7585 client: Dictaphone Corporation
problem: Cost reduction of Dictabelt* record packaging
7585 B
OLD
7585 S
NEW
results: Equivalent protection with annual savings of 45,000 lbs. of packaging materials, 5,340 cubic feet of storage space,
PLUS A SAVINGS OF $8,147.00 IN COST!
* Dictaphone and Dictabelt are registered trademarks of Dictaphone Corp.

Almost anybody can improve your packaging by increasing your packaging costs.

Almost anybody can save you money by giving you inferior packaging design.

But, when you can get better protection at less cost . . .

that's package engineering

CONTAINER LABORATORIES · INC

packaging consultants since 1923

EXECUTIVE OFFICES: 45 EAST 22 ND STREET • NEW YORK 10, N Y

NEW YORK • CHICAGO • WASHINGTON • SAN FRANCISCO • LOS ANGELES

For more information circle No. 246 on Reader Service Card

HOBBS ALQUIST

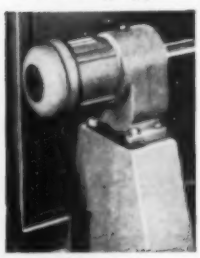
Web Winders Winding Engineering

1. REGULAR —for general winding applications
2. WITH DIFFERENTIAL —for unwinding application where constant tension is a factor
3. WITH SYNCHRONIZATION —for utilizing tension control regardless of process speed
4. SINGLE STRAND WINDER —for winding from central source to individual spools
5. AUTOMATIC PROGRESSIVE FRICTION —for automatic tension control direct from the web utilizing a series of overriding slip friction clutches
6. CUSTOM BUILT EQUIPMENT —winding and unwinding reels, stands with special attachments and companion equipment

An Engineering Plan For Whatever You Wind or Unwind

Hobbs-Alquist Winding Engineering solves every winding or unwinding problem throughout your plant — in terms of the exact demands of each individual process whether it involves constant tension, variable tension or any combination of tensions.

Our regular Hobbs-Alquist shown here is designed for rewinding applications—including extruding, coating, sensitive plastic printing operations. Also especially adaptable in textile finishing operations.



Send for special brochure giving details of Hobbs-Alquist Winding Engineering, showing versatility of Hobbs-Alquist Winders, illustrating typical applications. No obligation.

EST. 1882 **HOBBS MANUFACTURING CO.**
38 J Salisbury St., Worcester 5. Mass.

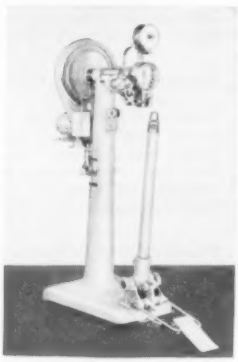
Branch Offices & Representatives in Irvington, N. J., Chicago, Cleveland, Greenville, S. C. and Toronto, Can.
WINDERS • HAND & POWER SHEARS • SLITTERS • DIE PRESSES
CORNER CUTTERS

Get High-Speed, Uninterrupted Stitching with

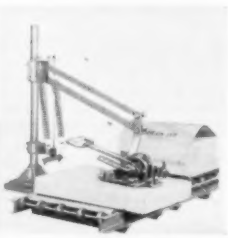
MID-STATES

Turn to Mid-States for fast, economical production and packaging. For over half a century Mid-States has led in consistent, high product quality and cost cutting know-how. Whatever your packaging need, it will pay to do business with Mid-States.

MID-STATES STITCHING WIRE on fibre throw-away spools gives you frictionless, uniformly smooth flow — off the coil and through the stitching head—to assure high speed, uninterrupted operation. *Available in 5, 10, 25, 50 lb. spools. All Standard gauges. Special gauges on request. Galvanized and copper-coated finishes.*



MID-STATES BOTTOM STITCHER MACHINE staples carton bottoms up to 72" wide, 40" deep. Effective on board stock to a maximum thickness of 3/8". Single foot pressure on saddle plate brings Bottomer Post into position. The famous "Tip-Toe" contact on electric switch starts and stops stapling. *Stapling Head Arms in 12, 30, 36 inches in length. Straight Arms and Sword Arm types also available.*



MID-STATES WIRE TYING MACHINES are your fastest, most economical means of assuring safe, intact shipments of products. Mid-States "T" model is the answer—it's simple, streamlined and fast! Moving handle forward and back tensions, ties, cuts wire in one easy operation. Mid-States supplies the wire to use with each machine.

MID-STATES STEEL & WIRE COMPANY

MID-STATES STEEL AND WIRE COMPANY
CRAWFORDSVILLE, INDIANA • JACKSONVILLE, FLORIDA

Three schools announce package engineering courses

Columbia University, Illinois Institute of Technology, and New York University announce evening courses in packaging. All of these courses rely largely on outside lecturers — men who are specialists in various areas of packaging. Registration for all of these takes place this month.

Columbia University's Department of Industrial Engineering announces a 30-week series starting October 3rd and continuing to May 22nd. Classes meet on Wednesday nights between 7:10 and 9:00 p.m. The first half of the series covers primarily consumer unit packaging, and the second half (which starts February 6th) emphasizes such topics as engineering data on shipping containers of all types.

Twenty-four packaging specialists including users, suppliers, marine engineers, consultants and industry association executives serve as lecturers. General direction of the course is under Professor Frederick C. Winter.

Columbia's Lecturers

Lecturers include William Bronander Jr., Scandia Manufacturing Co.; Thomas E. Dobbins, American Can Co.; William W. Fitzhugh Jr., William W. Fitzhugh, Inc.; Dr. L. G. Ghering, Glass Container Manufacturers Institute; Dr. Lenard P. Gotsch, American Can Co.; Frank W. Green, industrial packaging consultant; Herbert T. Holbrook, Standard Packaging Corp.; William E. Hughes, National Wooden Box Association; J. Gordon Lippincott, Lippincott & Margulies; Glenn Mather, Fibre Drum Manufacturers Association; John Mount, Insurance Co. of North America; Thomas J. Muldoon, Fibre Box Association; John W. Nordenson, Minnesota Mining & Manufacturing Co.; J. P. O'Hanlon, Radio Corp. of America; J. H. Parliman, Plax Corp.; Paul H. Paulsen, Wm. H. McGee & Co., Inc.; Frank Pocta, Paper Shipping Sack Manufacturers Association; A.F.G. Raikes, Bemis Bro. Bag Co.; Lawrence T. Ross, Union Bag & Paper Corp.; William Sederlund, National Starch Products, Inc.; Dr. Linton E. Simerl, Olin Mathieson Chemical Corp.; Charles A. Southwick Jr., packaging consultant; Earl R. Stivers, Stapling Machine Co., and Charles M. Woodcock, General Foods Corp.

Registration for these courses start September 24th. Full information is available from Professor Frederick C. Winter, School of Engineering, Columbia University, New York.

Illinois Tech Program

Illinois Institute of Technology announces a course in food packaging and methods materials. Classes will be held Wednesday evenings from 6:20 to 9:00 p.m. starting September 17th and ending January 26th, 1957. This course is conducted as a series of lectures by specialists in the various fields of packaging.

Topics covered include glass, fibre and metal containers; design and merchandising aspects of food packaging; managerial and control problems involved in packaging and other related subjects. Complete information may be obtained from the Department of Food Engineering, Illinois Institute of Technology, Technology Center, Chicago, Illinois. Registration takes place between September 10th and 14th.

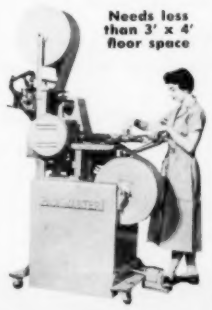
Course At NYU

New York University announces a course in package engineering, including protective design techniques and cost reduction studies. Classes will be held Tuesday evenings during the 1956 fall semester. Instructors will be drawn from the executive ranks of industry and engineering. Registration takes place from September 10th to 28th, in person or by mail. Complete information may be obtained from the Division of General Education, New York University, One Washington Square North, New York 3, New York.

"Our Packmaster does it 50 TIMES FASTER at 1\9 THE COST"

Reports one aircraft manufacturer

Save money — time — space — on small items packaging with the versatile, high-speed PACKMASTER. Packs, prints and counts packages automatically on one compact machine that quickly adjusts for all size packages. Packages may be transparent or opaque on either or both sides. Packages feed out in a die-cut ribbon which can be accordion folded for easy packing or quickly hand separated.



Needs less than 3' x 4' floor space

PACKS automatically

PRINTS automatically

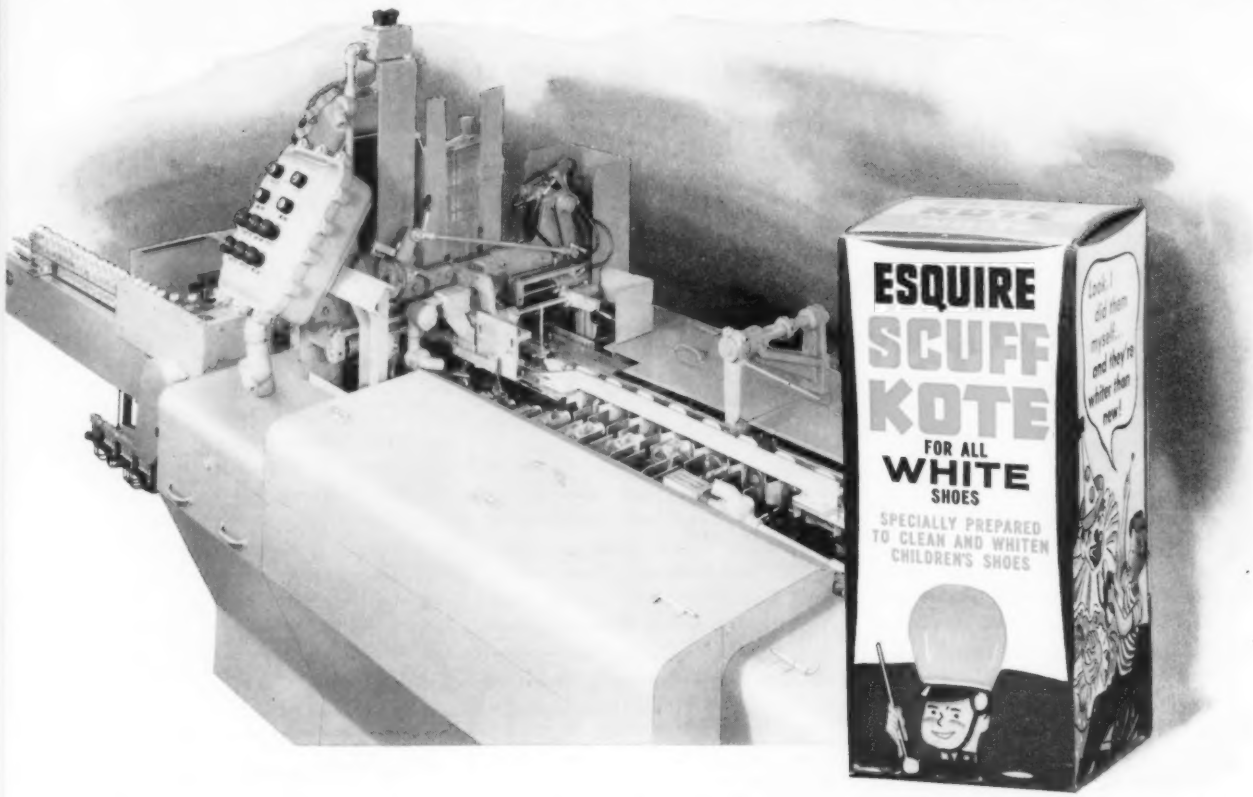
COUNTS packages automatically

Write for more details.

PACKMASTER SALES CO.

P. O. Box 3510 Akron 10, Ohio

can you use 300 PER MINUTE?



R. A. Jones and Company, Inc., announces the new Jones CMC-300, designed for fully automatic cartoning at 300 cartons per minute. This machine answers modern industry's demand for high speed packaging with utmost dependability of performance.

The Knomark Manufacturing Company, Inc., Brooklyn, producer of famous Esquire shoe dressings, has achieved outstanding efficiency in manufacturing and packaging techniques. The addition of this machine raises the total to 6 Jones Cartoners handling Esquire polishes — 4 CMCs and 2 CMVs.

300-PER-MINUTE SPEED MADE POSSIBLE BY:

1. **Vibration-free frame—redesigned to provide added rigidity and compactness.**
2. **Double-blade, short-stroke carton forming—to assure positive performance at highest speeds.**
3. **Redesigned power train—anti-friction bearings, flame hardened bearings, split clamp-type hubs.**

The CMC-300, with these and many other refinements, is as effortless at 300 per minute as older models at 150 per minute. The CMC-300 also offers the same wide adaptability to various load and carton sizes that characterized preceding CMC models.

See
300-PER-MINUTE
in action at
BOOTH #425
THE PACKAGING MACHINERY AND MATERIALS EXPOSITION OF 1956
SEPTEMBER 11-14
Cleveland Public Auditorium

R. A. JONES & COMPANY, INC.
Cartoning Machines — Soap Presses

P. O. BOX 485
CINCINNATI, OHIO
BRANCH OFFICES:
New York, Chicago, Los Angeles
St. Louis, San Francisco, Seattle

How to address Package Engineering:

Our executive and editorial offices are located at:

1791 West Howard Street, Chicago 26, Illinois

Only our Reader Service Cards go to P.O. Box 95, Village Station, New York 14, New York. These cards go through a processing operation.

You can help us give you better service by addressing all correspondence (other than the cards) to our Chicago offices.

CLASSIFIED ADVERTISING

Our classified advertising section is intended for use by those wishing to buy or sell used packaging equipment, to employ packaging personnel, seek such employment, offer or seek business opportunities. It is not available for general advertising. Terms: Cash with order. Rates: Up to 60 words, $10.00. If boxed, $20.00. Up to 120 words, $20.00. If boxed, $40.00. Up to 180 words, $30.00. If boxed. $60.00.

Circulation this issue in excess of 35,000

FOR SALE

FOR SALE — Packaging machine, Battle Creek Model B T 30 and Bond M L Dual Filler. Fills, seals folding boxes, both bottom and top. Continuous flow principal. Quickly convertible handles. Wide range of boxes up to 10 inches in height, 30-40 per minute. Price new machine $15,120.00; this used one $5,000.00. Reply to: W. J. Wittekind Company, 1041 Richmond Street, Cincinnati 3, Ohio.

HELP WANTED

PLANT MANAGER — We need an experienced man to manage a bag plant in the South producing duplex and multiwall kraft bags, pasted and sewn. Bag-making experience required, printing experience highly desirable. Send full details on education, job history and salary requirements. Replies in strict confidence. Reply to Box No. 901, PACKAGE ENGINEERING, 1791 W. Howard St., Chicago 26, Illinois.

Index of Advertisers

Amos Packaging Div., Amos-Thompson Corp. 59
Arenco Machine Co., Inc. 42
Bakelite Co. Div. Union Carbide and Carbon Corp. 8-9
Ball Brothers Co. ..... inside front cover
Bartelt Engineering Co. 13
Battle Creek Packaging Machines, Inc. 43
Bronander Engineering & Research Corp. 10
Brown Bag-Filling Machine Co., Inc. 49
E. J. Cady & Co. 54
Chisholm-Ryder Co. of Pennsylvania 63
Clybourn Machine Corp. 52
Arthur Colton Co. 7
Consolidated Packaging Machinery Corp. 61
Container Laboratories, Inc. 65
Crossett Paper Mills ..... inside back cover
Dobeckmun Co. 5
Dow Corning Corp. 20, 53
Economic Machinery Co. 14
Elgin Manufacturing Co. 54
George D. Ellis & Sons, Inc. 53
J. L. Ferguson Co. 44-45
The Filler Machine Co. 64
Adolph Gottscho, Inc. 55
Hobbs Manufacturing Co. 66
Hudson-Sharp Machine Co. 50
Island Equipment Corp. 55
R. A. Jones & Co., Inc. 68
Lermer Plastics, Inc. 64
The Mead Corp. 41
Mid-States Steel & Wire Co. 66
Minnesota Mining & Mfg. Co. 6, 16
Packmaster Sales Co. 67
Paisley Products Inc. 3
Paterson Parchment Paper Co. 51
The Pfaudler Co. 21
Potdevin Machine Co. 57
Reynolds Metals Co. 1
Riegel Paper Corp. 33
Scandia Manufacturing Co. 11
Sheffield Tube Corp. 22
H. P. Smith Paper Co. 56
Standard-Knapp Div. Emhart Mfg. Co. 19
Stone Container Corp. 15
U. S. Bottlers Machinery Co. 60
The Visking Corp. 17-18
Waxed Paper Merchandising Council, Inc. 12
Wayne Paper Box & Printing Corp. 52
A. H. Wirz, Inc. ..... outside back cover

What we think

Probably no topic is of greater current interest throughout industry than is creative thinking. Apparently, it represents one of the pressing needs of today's industrial scene. The packaging field is no exception.

In spite of the current high level of production and distribution of consumer goods, management everywhere is searching for new ways to cut costs. Further, it is becoming increasingly aware of just how reduction in packaging costs can mean greater earnings and higher dividends.

Probably no two people agree on what they mean by creative thinking. However, there does seem to be general accord on the point that it means focusing attention on new methods, using imagination to develop alternatives to existing methods, and finding new applications for what have been considered standard practices.

A special problem for the man concerned with technical and operational packaging is that he must walk a tightrope between over-packaging and under-packaging — from a cost standpoint. It is easy to provide excessive protection. At the same time, it is easy to make an effective showing of cost reduction by minimizing the packaging of a product. The real problem involves making a compromise between these two concepts — and still satisfying the demands of production, research, engineering and sales.

To meet all the implications of this challenge, packaging people constantly are reaching out for new ideas. Fortunately, a generating point of such ideas is about to crystalize: The 18th Annual Forum of Packaging Institute which will be held in Cleveland, September 10-12.

There is probably no better place to get specific suggestions leading to new ideas, if not the actual ideas themselves, than in the meeting rooms and corridors of a Packaging Institute forum. Of course, there are those who say that personal attendance is unnecessary, since the proceedings are recorded *in toto*. Also, others may point out that the frailties of the human mind are such that one retains only a part of what he hears.

Even so, the benefits of actually attending these sessions far outweigh the drawbacks involved. Even though one may read a detailed account of what a speaker says, there is nothing quite like being there to experience the emphasis and interpretation an able speaker makes in the course of his presentation.

The real value of listening to a talk is not to record it verbatim but to gleen an idea from it. The fellow who writes it all down is so busy he easily misses the real impact of a talk. An alert packaging line production man, say, on the other hand, catches one or two high points — and perhaps at once mentally applies them to his own operation.

In this connection, one engaged in any specialized area of packaging should not be too hasty to conclude that a certain session lies outside of his purview. In a somewhat horizontal activity such as packaging it frequently happens that one has an opportunity to make an unprecedented application of a technical idea in a foreign field. For example, those concerned with packaging hardware and pharmaceuticals draw valuable ideas from the experience of others — who package foods.

One of the big problems of a specialized field is that the people in it are scattered across the land. Many lack the opportunity for contact with their colleagues — a privilege of those located in metropolitan areas. As a result, the gathering of the packaging clans at such a forum provides a unique experience. Aside from actual ideas and potential applications suggested by program speakers, there is a great opportunity of fraternizing with others in a common life work.

Any one who doubts this should strike up a conversation with the man sitting next to him at one of these meetings. More often than not, lasting friendships and an extremely helpful interchange of technical and operational know-how are launched. A casual corridor conversation may be the springboard to the solution of one's most pressing production line problem.

This year's Packaging Institute Forum offers a special opportunity to those located beyond easy access of New York. We congratulate Packaging Institute for bringing its stellar aggregation of experts to Cleveland — thereby making the meetings within the grasp of many unable to attend previous forums. Further, we predict that those who have always attended these programs in the East, recalling the benefits gained over the years, will unhesitat ngly elect to follow PI to Cleveland.

For those who will be attending for the first time, may we say, welcome aboard and good hunting! The ideas are there. They need only be picked off.

Bruce Holmgren

Editor

how firm a foundation?

Crossett bleached food boards provide a solid foundation for a package that is successful functionally, artistically and financially.

The highly versatile nature of our cylinder machine production permits us to tailor a board to your exact needs in strength, folding, scoring, color printability and other press characteristics. Using long fibred pulps for ruggedness we can apply short fibre hard wood in layers where it does the most good in providing a super smooth white sheet.

Because ours is a new mill, we are deliberately taking on each new commitment carefully with an eye to long range customer association.

Once you become a Crossett customer with established needs you can count on regular supply with on-time delivery in all kinds of markets.

Good boards for good package foundation and dependable service for a firm foundation of business friendship.

CROSSETT PAPER MILLS
A DIVISION OF THE CROSSETT COMPANY

GENERAL SALES OFFICE	BALTIMORE OFFICE	DALLAS OFFICE	CHICAGO OFFICE	CINCINNATI OFFICE
CROSSETT, ARKANSAS	J. W. Taylor 414 St. Paul St.	H. E. Manner 3409 Oak Lawn Ave.	L. J. Walker W. V. Williams, D. W. Schwier 300 West Washington	R. J. Lantry, J. T. Allen 1816 First National Bank Bldg.

For more information circle No. 251 on Reader Service Card

Some packages provide greater **USER CONVENIENCE** *than others-*

Leak-proof collapsible metal tubes with special applicator tips by Wirz solve packaging problems for caulking compounds, lubricating oils and greases, and household cements. Wirz' technicians work with you to develop the tube and tip design best suited to your packaging requirements.

An illustrated brochure describes Wirz' packaging engineering and laboratory services in detail. Write for a copy today . . . there's no obligation.

COLLAPSIBLE METAL TUBES AND PLASTIC MOLDING

ALSO RIGID CANS AND IMPACT EXTRUSIONS BY AMERICAN EXTRUSION CORPORATION, DIVISION OF A. H. WIRZ, INC.

A. H. WIRZ Inc.

4th & IRWIN STS., CHESTER, PA. • Also CARROLLTON, KY.

NEW YORK • CHICAGO • LOS ANGELES • MEMPHIS • HAVANA

For more information circle No. 252 on Reader Service Card